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DIFFERENCES IN SELF-CONCEPT IN LEARNING DISABLED

VS

NON-LEARNING DISABLED ADULTS

A Dissertation Presented

by

MARTIN JOHN MCGLYNN

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF EDUCATION

February 1983

Education

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By

MARTIN JOHN MCGLYNN

Approved as to style and content by:

Professor Grace J. Craig, Chairperson

Professor Alfred L. Karlson, Member

Professor Sheldon Cashdan, Member

Mario Fantini, Dean
School of Education

DEDICATION

This research and the work that went into it is dedicated to the philosophy and goals of the Community College Field-Based Doctoral Program of the University of Massachusetts and its Director, Charlotte C. Rahaim.

ACKNOWLEDGEMENT

It is with sincere pleasure that I take this opportunity to acknowledge those who have been instrumental in the success of this endeavor. I am especially grateful to Professor Grace J. Craig for her support and professional expertise throughout the entire project. I wish also to thank Professor Alfred L. Karlson for his thorough critiques and encouragement. Thanks go also to Professor Sheldon Cashdan for his participation.

Special appreciation is felt too for the technical assistance provided by Alan Pottak. Finally, I am grateful to my parents for their consistent encouragement in academic pursuits in childhood through adulthood.

ABSTRACT

Differences in Self-Concept in Learning Disabled
vs. Non-Learning Disabled Adults

(February, 1983)

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Directed By: Grace J. Craig

This study compares a group of thirty-four learning disabled adults to a group of thirty-seven non-learning disabled adults on two measures of self-concept. All subjects were community college students or students in a post secondary vocational program. The Tennessee Self Concept Scale and a specially designed Personal Data Form were administered. Several hypotheses are stated suggesting overall deficits in self-concept for the learning disabled group in comparison to the control group.

The experimental group was also broken down into three separate groups based on age or grade of identification: Very Early Identified, Early Identified, and Late Identified. It was hypothesized that the later one is identified the greater the deficits in various aspects of the self-concept.

The results were not indicative of overall differences in self-concept between the learning disabled and non-learning disabled groups. Greater self-criticism, conflict in self-perception, deficits in academic self-concept, and more indications of difficulties in psychosocial adjustment are noted in the learning disabled group.

In examining the data for the experimental group based on age or grade of identification, overall deficits are not indicated. Less personality integration and greater certainty in self-perception in the earlier identified is cited. Greater conflict in self-perception and more indications of "neurosis" are evident in those later identified.

Differences in academic self-concept are reported based upon the type of learning disability reported by the subject. Descriptive data yielded by the Personal Data Form is offered on the learning disabled sample. Conclusions are drawn from the data leading to suggestions for areas of compensation or remediation of the associated disorders of the learning disabled in post secondary educational programs.

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CHAPTER I

INTRODUCTION

The increasing presence of "Learning disabled adults" in our institutions of higher education is continuingly causing greater concern in those educators responsible for meeting their needs. Most post secondary educators express a lack of knowledge of the nature of these learners and how best to serve them. These teachers, especially those in Community College settings, have sought assistance in identifying the learning disabled, methods for effectively delivering course content to them, and a better understanding of the nature of learning disability and its etiology.

This quest for understanding often ends in frustration and is tied to confusion in the emerging field of learning disabilities. The term itself, "learning disability", means very different things to different people . . . . . Although the term is generally familiar to most all of us, there is an underlying confusion as to the real meaning of the term. This confusion is furthered by the number of terms used interchangeably to label these learners: learning disabled, perceptually handicapped, brain-injured, dyslexic and a host of others.

This labelling dilemma and confusion as to the real nature of the concept stems from differences in theoretical orientation to the problem, and the interdisciplinary nature of the field and its development. A variety of professionals from different disciplines have brought with them varied perspectives and jargon peculiar to their professions. Among the specialists involved have been professionals from medicine, education, psychology, speech and language, and others. J. W. Lerner

(1971) cites that the mingling of professions has brought a multi-disciplinary depth to the study of learning disabilities. However, a depth of confusion is also evident. For example, one may cite the case of an adult experiencing learning difficulties in a college setting. The suspicion of a perceptual problem may be raised. Often this student is referred to a medically oriented clinic for assessment and diagnosis. The resulting assessment is frequently steeped in the jargon of the medical model meaning little to the referring educators and vice versa. Countless similar examples can be offered.

Beyond the multi-disciplinary nature of the field, difficulties in the areas of etiology, definition, diagnosis, and prevalence pose difficulties for practitioners. A general discussion of these issues will follow. Special emphasis will also be placed on the child orientation of the field. The problems just mentioned become even more complicated as one considers issues related to learning disabled adults. This, in fact, will be the focus of this research.

All the difficulties referred to above stem largely from the relative newness of the discipline. It might be useful at this time to outline the historical development of the discipline. This will be followed by a more lengthy discussion of definition and prevalence. Finally, discussion of the plight of these learners and the general lack of understanding of their dilemma is offered. This serves to set the stage for this current research project designed to begin to fill the void in understanding of the learning disabled adult with particular attention to the nature of their self-concept and support needs.

Historical Development

Different sources date the development of the field back to different places in time. Discrepancies in labelling the earliest endeavors in the field relate to the distinction between early recognitions of disorders later categorized under the learning disability umbrella and the actual emergence of learning disabilities as a field of its own. Lerner (1971) assumes the former mode of thought and reports the work of Morgan, an English opthamologist, in the late 1800's. As early as that time, he reported a condition called "word blindness" which he tied to an inability to read.

Orton in the 1930's as a neuropathologist delved into the relationship between cerebral dominance and developmental language disorders (Lerner, 1971). He provided the basis for a theoretical orientation that is still held by some current practitioners in the field. His work also provided an impetus for others who made early contributions in the area of language disorders and aphasia.

At about the same time, Kurt Goldstein, a behavioral scientist, began to study the behavior of brain injured soldiers, casualties of World War I. After careful observation of the behavior of these soldiers, he was able to identify five behavioral characteristics common to his patients: forced responsiveness to stimuli (distractibility), figure-background confusion, hyperactivity, meticulosity, and catastrophic reaction (Hallahan and Kauffman, 1976).

According to Hallahan and Kauffman, it was these germinal investigations of Goldstein that laid the foundation for the two most important figures in the evolution of the field of learning disabilities:

Alfred Strauss and Heinz Werner. Strauss pioneered in the area of neurology and Werner from the perspective of developmental psychology. Their collaboration produced monumental impact in the field.

The first major contribution of Strauss and Werner was the replication of Goldstein's results with a population of brain-injured, mentally retarded children. As the result of further research, Werner and Strauss concluded that brain damage was a cause of distractibility and hyperactivity. Brain-injured as a category of exceptionality emerged.

A further link in this development of thought came from Strauss' observance of the same behavior characteristic of brain-injured children in children with no history of trauma of any kind. At this time, he drew a distinction between "endogenous" and "exogenous" injury. He further concluded that the behavioral manifestations alone warranted the assumption of brain damage. Two well known terms emerged becoming somewhat synonymous with the label learning disability, "Strauss Syndrome" (Stevens and Birch, 1957) and "minimal brain dysfunction" (Clements, 1966).

From this body of research, Strauss and Lehtinen made recommendations for manipulations in the learning environment and materials to better instruct these children. This is perhaps one of the earliest attempts at special education designed specifically for "learning disabled" children.

There was certainly no shortage of criticism for the work and conclusions of Strauss. Strauss and Werner's work was fraught with questionable methodology. The conclusions drawn from the research and their utility has been seriously questioned. Lerner quotes Samuel Kirk (1963) as stating that applying the term brain injury does not constitute a

diagnosis that leads to methods of treatment or teaching. Educators have continued to register this concern. Nevertheless, they started the ball rolling.

William Cruickshank, for example, replicated the above work with children of normal or above normal intelligence, cerebral palsied children. Following the educational tenets of Werner and Strauss, he applied their techniques to this population and provided further impetus in the development of the field.

Other contributions and perspectives followed quickly. Newell Kephart's attention to perceptual-motor training and C. E. Osgood's and Samuel Kirk's focus on language disorders are but a few of the contributions to follow. Hallahan and Kauffman (1976) state:

> "...professional literature by the early 1960's was beginning to reflect a new concern for the child of average intelligence with learning problems--the same learning problems evidenced by a sizable proportion of mentally retarded children. The formation of the parent organization, the Association for Children with Learning Disabilities (ACLD), in 1963, coupled with the creation a few years later of a Division for Children with Learning Disabilities within the professional organization known as the Council for Exceptional Children, provided the formal confirmation of this new field of special education." (p. 10)

It was the parent organization mentioned above that actually coined the term "learning disability" in 1963 to confront the labelling confusion permeating the professional literature (Hallahan and Kauffman, 1976).

This is a brief historical account of the development of the discipline. Although my focus will be primarily on the learning disabled adult, an understanding of the developmental milestones of the field in general is essential.

Definitions

To offer a consensual definition of learning disabilities is difficult, if not impossible. Bateman (1964), who was instrumental in the coining of the expression itself in 1963, intended the term as a way of referring to children who experience problems in learning but who do not fit other classifications of handicapping conditions. However, since that time, it has been pointed out that little progress has been made. For example, definitions are still as varied as the historical antecedents and the current theoretical positions. Cruikshank states, "In this area...not only is there an over-abundance of terminology but there is no common denominator of understanding" (Sabatino and Miller, 1980). It is reported in the same article just cited that Hammill (1972) was able to report no less than sixty definitions in current use.

Many definitions, as opposed to defining what a learning disability is, define the term by what it is not. Greenlee and Hare (1978) state, "Professionals find it difficult at present to agree upon a single definition. Stating what the category is not seems to be much easier than defining specific criteria for inclusion."

The global, umbrella nature of the term is also at the heart of the definition dilemma. Lovitt (1975) suggests in the context of a discussion of Applied Behavioral Analysis (ABA) that a researcher or

teacher from that perspective would not conceive of learning disabilities as a specific entity any more than he would view psychosis as a specific syndrome. Reger (1979) shares this point of view. He indicates that there probably has never been a successful effort to sort people into discrete, unique categories that allow for precise predictability. Yet, when it comes to learning disabilities, the search is for just that type discrete category. It is this unidimensional approach that has brought the disparity of definitions to what is better viewed as a multidimensional concept. Coleman and Davis (1976), in the same vein and perhaps overly pessimistic, quote Wepman, "There is little agreement either in medicine or in education on criteria for identifying children with...learning disabilities. Because the disabilities presented by these children are extremely heterogeneous, the search for any commonality..has been fruitless."

Perhaps more fruitful at this point in the discussion would be a review of some of the more popular definitions of learning disability and those of a more "official" nature. It seems that the major model used in conceptualizing learning disabilities is a discrepancy model. The student performs lower than expected. This expected level of performance is almost always based on age and measured intelligence (Reger, 1979). This definition doesn't go far enough. What is behind this discrepancy?

Wepman in 1974 stated that learning disabilities are essentially a problem of perception and perceptual disorder. He posits that the disorder is centered in the neurological system of the human organism. Wepman's position was influential in developing the definition credited

to the national Project on the Classification of Exceptional Children (1975). It states:

> Specific learning disability, as defined here, refers to those children of any age who demonstrate a substantial deficiency in a particular aspect of academic achievement because of perceptual or perceptual-motor handicaps, regardless of etiology or other contributing factors. The term perceptual as used here relates to those mental (neurological) processes through which the child acquires his basic alphabets of sounds and forms. (Hallahan and Kauffman, 1976, p. 27)

This above definition is clearly of a perceptual nature. This is perhaps a move beyond definition into the realm of etiology. In fact, perhaps more congruence among definitions exists than is first apparent. The discrepancy may emerge as one moves into the realm of etiology.

Hallahan and Kauffman (1976) claim to have isolated five major points that are almost universally present in any definition. They state:

> The learning disabled child: (a) has academic retardation, (b) has an uneven pattern of development, (c) may or may not have central nervous system dysfunctioning, (d) does not owe his learning problems to mental retardation or emotional disturbance.

It is my sense that these five elements are certainly present in the three official definitions still to be mentioned.

The first of these official definitions is the product of the National Committee on Handicapped Children. The committee defines learning disabilities as follows:

> Children with special learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc. They do not include learning problems which are due primarily to visual, hearing, or motor handicaps, to mental retardation, emotional disturbance, or to environmental disadvantage. (Hallahan and Kauffman, 1976, p. 19)

In addition to the definition cited above, two more definitions were formulated by the collaboration of several national agencies. The definitions formally emerged from Task Force II of the Minimal Brain Dysfunction National Project on Learning Disabilities in Children (1969). The two definitions follow:

> Children with learning disabilities are those (1) who have educationally significant discrepancies among their sensory-motor, perceptual, cognitive, academic, or related developmental levels which interfere with the performance of educational tasks; (2) who may or may not show demonstrable deviation in central nervous system functioning; and (3) whose disabilities are not secondary to general mental retardation, sensory deprivation or serious emotional disturbance. (Hallahan and Kauffman, 1976, p. 20)

> Children with learning disabilities are those (1) who manifest an educationally significant discrepancy between estimated academic

> potential and actual level of academic functioning as related to dysfunctioning in the learning process; (2) may or may not show demonstrable deviation in central nervous system functioning; and (3) whose disabilities are not secondary to general mental retardation, cultural, sensory and/or educational deprivation or environmentally produced serious emotional disturbance. (Hallahan and Kauffman, 1976, p. 20)

The five elements referred to earlier as almost universally present in well constructed definitions seem to me to be clearly identifiable in all those cited above. Again, perhaps those so pessimistic of the state of current definition are confusing definition issues with issues of etiology. This is not to say, however, that there is not a long way to go in this regard. This issue is to be taken quite seriously. As Reger (1979) so aptly states, "How is it possible to call children learning disabled and place them in programs designed specifically for the learning disabled if, in fact, there is no definition of learning disabilities?"

Prevalence

It is very difficult to arrive at accurate estimates of the number of learning disabled students in our schools. This is a problem as one examines both child and adult populations. Learning disabilities are often referred to as one of the "hidden handicaps". Although this is not entirely true, since it does have its behavioral manifestations, this is one factor in the difficulty in establishing an estimate of prevalence.

Another factor of importance in this quandry is the nature of the

definition dilemma previously outlined. Prevalence estimates are sure to vary as one looks for different symptomology as identifiable. Illustrative of this point is the fact that the ratio of learning disabled pupils to mentally retarded pupils in Wisconsin is three times that found in Minnesota. This may well mean that a learning disabled child in Wisconsin is mentally retarded in Minnesota (Sabatino and Miller, 1980).

To add a quantitative dimension to this discussion, however, it seems that most sources cite estimates of prevalence ranging from one (1) to thirty (30) percent of the school population. According to J. W. Lerner (1971) those who employ an underachievement approach to learning disability settle in the vicinity of fifteen (15) percent. This estimate varies as one attempts to define the subjective notion of underachievement. Employing the three "official" definitions cited in the previous section or any definition satisfying the five elements outlined by Hallahan and Kauffman, estimates seem to range between one (1) and three (3) percent. Again, one gains a perspective for the subjective nature of the concept under study. This subjectivity is not to be taken lightly when one considers the link between prevalence estimates (statistics) and legislative funding. Also, the estimates cited have been ascertained almost solely in elementary settings. I am aware of no published effort to determine prevalence in adult populations. The future of many needy learners hangs in the balance.

The Learning Disabled Adult

It should be clear at this point that the field of learning disabilities is still emerging and as a result is plagued with issues of

definition, prevalence, theory, diagnosis and intervention strategies. These issues are further compounded as one considers the plight of the learning disabled adult.

Attention to this problem has just recently begun to emerge. Cox (1977) indicates that a review of the learning disabilities literature indicates that there is a serious deficiency in research, theory, and remediation techniques for learning-disabled adults. Cox indicates that this may be due to the fact that the most successful remediation is begun in early school experience. However, she is quick to point out that because learning disabilities is a new concept in education and its ancillary professions, many learning disabled adults have gone unidentified and unserved. They are disabled in the ability to cope with most traditional academic learning experiences and lack a personal and societal understanding of the nature of their deficits. This kind of student is frequently identifiable in the community college setting.

Recently, an effort was made to compile a directory of junior, community, and four-year colleges and post-secondary training programs accommodating students with specific learning disabilities. The replies were clearly indicative of a lack of knowledge of both the problems of older learning-disabled students and of the methodologies necessary to help them (Wennberg and Hare, 1977). This discovery prompted further research reported in the same article that seems to indicate a steady decline in services as the child leaves the elementary school. The authors cited see this suggestive of a notion that most learning-disabled students no longer need supportive services

when they enter senior high school. It seems that students at this level receive outside help, drop out, or are subsumed under other labels, i.e. slow-learning or disturbed.

Other authors corroborate this decline in services and attention as a function of age. Scranton and Downs (1975) state that most neglected is the area of secondary learning disability programs. They indicate that the introductory texts in the field are almost devoid of mention of the "adolescent", " junior high", "high school", or "secondary level" learning disabled "child". I will extend this criticism to include adults as well.

Three general groups of learning-disabled adults are identifiable. First of all, there are those younger adults and other fortunate few who come to adulthood and its institutions of learning with an understanding or awareness of the nature of their disability and their unique needs. This population is hopefully on the rise as PL 94-142 continues to make its impact. Second, there exists a slowly growing body of adult learners who, through their own perserverance or contact with perceptive professionals of one discipline or another, have been able to somewhat recently identify themselves as learning disabled adults and initiate a process of better understanding themselves, their past, and their unique needs. Finally, there are those too many unfortunate learning-disabled adults who continue to go unrecognized. This group of adults often continues to meet frustration in both educational pursuits and many other areas of adult pursuit. This seems to be a contradiction. We purportedly live in an age of humanistic education which seeks to integrate the whole person--emotionally, physically, and

intellectually. The concept of the "life-long" learner is widely acclaimed (Gross, 1977). Yet, the particular needs of the learning-disabled adult continue to be largely ignored.

It is worthy of mention at this point, and comes as a surprise to many, that this issue has now moved beyond the scope of a philosophical discussion. Section 504 of the Rehabilitation Act of 1973 mandates equal opportunity for all people to benefit from educational programs and services. The definition of physical or mental impairment in Section 504 includes "specific learning disabilities" (Miller, McKinley, and Ryan, 1979). It is undoubtedly time for society in general and post-secondary institutions in particular to respond to the mandate of the law and the philosophical rhetoric we perpetuate.

Servicing the Learning Disabled Adult

A foundation has been laid for the provision of services to learning-disabled adults in post-secondary education. Much is to be explored in this regard, however, some of the initial moves have been made. Sheralyn Cox (1977) posits that remediation and compensation for the learning-disabled adult requires three areas of intervention: (1) identification, (2) individualized adult education, and (3) remediation of associated disorders. A discussion of each of these areas is in order.

The reader will recall that in the previous section I referred to a large population of adult learners who are learning-disabled and have gone unidentified. This issue of identification is no easy task. It presents a two-fold problem. Firstly, those who are in the best position to make early tentative identifications are often unaware of the

indicators and nature of specific learning disabilities. I am referring to counselors and teachers in our post-secondary institutions. This points clearly to the intense need for staff development and in-service training in alerting counselors and faculty to the characteristics and needs of these learners. Secondly, once a tentative identification of a learning-disabled adult is made a more formal assessment is usually in order. This too is no easy process. This area in general is fraught with problems. Beyond the general assessment issues plaguing the field, one must consider that almost all the formal tools of any substantial reliability or validity were designed for use with children. This poses considerable problems for the diagnostician working with adults and suggests an additional focus of research concern.

I turn now to the need for providing an individualized education to the learning disabled adult. This area also is in the pioneer stages. How can the unique needs of these learners best be served? Some educators have suggested that these adults must be viewed as possessing handicaps similar to and as serious as sensory impairments of blindness and deafness (Cox, 1977). Following this line of thought compensation is offered in the shape of readers, recorders, calculators, and other resources usually associated with the physically and sensory impaired student. Although this is a beginning, it seems obvious that this response does not go far enough. It is my subjective opinion that the answer to this issue will emerge from the application of learning theory research in general. The literature geared at satisfying the unique needs of all learners holds special clues

and promise for the future of learning disabled adults. Of particular interest in this regard is the body of literature forming around the learner/teacher style dilemma.

The third area of concern referred to by Cox, she broadly terms associated disorders. In this area, there is an even greater gap in the literature. The importance of this dimension cannot be overstated. It has been commented that the personality is the force that puts the learning tools to work (West, Carlin, Boserman, and Milstein, 1978). What little research that exists has been done primarily with learning disabled children. This research seems to confirm that learning disabled children have lower self-esteem than "normal" school children. This inadequacy seems also to have generalized to the home environment as well (Thomson and Hartley, 1980). Difficulties in peer relations are also to be cited.

It seems clear to me that the self-concept of the learning disabled adult becomes a critical element of the educational process. This necessitates considerable research effort. As a result, I have chosen to focus on the third area of concern raised by Cox, associated disorders. It makes intuitive sense that adults who have spent a lifetime failing in academic and related pursuits are especially subject to emotional distress, personality disorders, and difficulties in social behavior. One might also expect that the early difficulties in peer and family relationships to be cited would lead to similar problems in adulthood. It is my intention to illustrate this assumption both subjectively and objectively. The illustration of differences in self-concept in learning disabled adults from a group of nonlearning disabled

adults will provide a foundation for incorporating attention to self-concept into any program attempting to meet the needs of these traditionally unserved adults.

Further, a distinction will be drawn between early and later identified learning disabled adults. It is my assumption that the later identified adults will exhibit significantly more indications of negative self-concept and other associated disorders than their early identified counterparts. If this hypothesis holds true, further impetus will hopefully be provided for early and careful screening of these learners. Perhaps untold damage can be avoided.

In closing, a review of the learning disabilities literature reveals that there is a serious deficiency in research, theory, and remediation techniques for learning disabled adults. Cox (1977) suggests the need for three areas of intervention: (1) identification, (2) individualized adult education, and (3) remediation of associated disorders. It appears that the greatest gap in the literature is in this third area of intervention, associated disorders. As a result, associated disorders will be the focus of this research leading to implications for meeting the needs of the learning disabled adult in post secondary educational settings. I turn now to a review of the literature as it relates to this topic.

CHAPTER II

A REVIEW OF THE LITERATURE

The body of knowledge regarding the learning disabled is still young and in the emerging stages. As stated throughout the introduction it is plagued with complicated issues of definition, prevalence, theory, diagnosis, and effective intervention. Although considerable strides have been made in the area, the bulk of the literature is child oriented. Cox (1977) is quoted as indicating that a review of the learning disabilities literature indicates that there is a serious deficiency still in research, theory, and remediation techniques for learning disabled adults.

This insight is corroborated by Wennberg and Hare (1977). Their effort to compile a directory of junior, community, and four-year colleges and post-secondary training programs accommodating students with specific learning disabilities points to a lack of knowledge of both the problems of older learning disabled students and of the methodologies necessary to help them.

This same point was further substantiated by a review of texts in the field conducted by Scranton and Downs (1975). Their review revealed that the professional texts were almost devoid of mention of learning disabled beyond the "elementary" years.

All this serves to highlight the particular need for research into the nature and needs of learning disabled adults. This is particularly true when one considers that learning disability is a relatively new concept in education and its ancillary professions (Cox, 1977).

As a result, many learning disabled adults have gone undiagnosed and unserved.

In the same article just cited Cox suggests that remediation and compensation for the learning disabled adult required three areas of intervention: (1) identification, (2) individualized adult education, and (3) remediation of associated disorders. As stated in the introduction, this third area of intervention, remediation of associated disorders, will be the focus of this current research.

Henry David Thoreau in his classic, Walden (1854), states, "Public opinion is a weak tyrant compared with our own private opinion. What a man thinks of himself, that it is which determines...his fate" (Scheirer and Kraut, 1979). The psychological literature abounds with research indicating the enormous impact of how one perceives the world on how they think, feel, and behave. It has even been said that of all the subjective factors affecting the way we see the world, the self-concept is perhaps the most influential. And further, how a person typically tends to view himself will have much to do with how he views the world, and particularly other people in the world (Hershey and Lugo, 1970).

This notion that a person's concept of self influences how he behaves is deeply embedded in our social philosophy. It is hypothesized that a positive self-concept will lead to constructive, socially desirable behavior and conversely that a distorted self-concept will lead to deviant, socially inadequate behavior. This hypothesis receives considerable support (Combs, Avila, and Purkey, 1971 and Ryan

and Wisecarver, 1975). These studies seem to indicate that self-concept affects an individual's behavior more than any other determining factor. They purport that people act in accordance with what they have learned from the significant persons in their lives to be themselves.

Our institutions of education stand as major components of our social structure. It has been stated that next to the home, the school environment is the most important factor in shaping self-concept (Purkey, 1970). It is hypothesized that once the teacher becomes a significant influence, his or her beliefs about a student's ability to achieve will become the student's beliefs (Ryan and Wisecarver, 1975). In such an environment, the learning disabled are often quick to perceive themselves as less than adequate. For the learning disabled child, school and school related tasks can be some of the most frustrating experiences a child will ever encounter. It has been stated, for example, that the child with a severe reading difficulty is subject to an environment in which he is being constantly pressured by both parents and teachers to succeed (Thomson and Hartley, 1980). The result of such pressure can frequently manifest itself in emotionally unsatisfying and stressful relationships with the teachers, family, or friends (Shelton 1977). It follows intuitively that learners who have spent a life time failing in academic and related pursuits are especially subject to emotional distress, personality disorders, and difficulties in social behavior as adults.

This proposition seems to be supported by the available research.

It has been posited that as a result of the learning disabled student's feeling of inadequacy and the assimilation of negative feedback emanating from his environment, he is likely to develop a deficit self-concept (Lindsey and Frith, 1981). According to Deschler (1979), overt manifestations of deficit self-concept itensify when continued feelings of failure exist in conjunction with the pressure of puberty, adolescence, or other normal life pressures. The intensity of these feelings might eventually discourage the learning disabled from undertaking even the simplest of learning tasks. Lindsey and Firth (1981) urge that the result of such a cycle may be a learning disabled adult evidencing some type of personality disorder.

Johnson (1981) provides additional support for this hypothesis. She depicts the learning disabled adult walking a tight rope, balancing from culturally unacceptable behaviors. Johnson sees enormous stress, internal and external, as characteristic of their life style. She suggests that this stress wears one down and predisposes the learning disabled to even further medical and psychological difficulties.

Despite this anecdotal reporting of deficit self-concept and psychological disorders in learning disabled adults, little or no empirical basis has been provided. Thomson and Hartley (1980) cite that apart from passing references to secondary emotional difficulties, little research into the effects of dyslexic difficulties on psychological development has been reported. The empirical research that has been done in this regard has followed the course of the learning

disability field in general. It is largely child oriented. Even at that level, however, Shelton (1977) states that a variety of teaching techniques and programs have been developed to ameliorate the various academic difficulties of learning disabled children, but considerably less attention has been given to the development of programs or techniques to enhance the social and emotional development of the learning disabled child.

The Learning Disabled Child

The empirical research that is on hand indicates that learning disabled children hold significantly more negative self-perceptions and have less confidence than non-learning disabled comparison groups (Chapman and Boersma, 1979). Utilizing the Student's Perception of Ability Scale (SPAS), eighty-one learning disabled and eighty-one normally achieving control children in grades three to six were compared. The negative self-perceptions and lack of confidence cited were evidenced toward reading, spelling, arithmetic and school in general. The authors suggest that academic self-concept is formed, to a large part, before the end of grade three, and that it quickly stabilizes as patterns of school success and failure are established. The implications of this contention in serving the learning disabled adult can be staggering.

A study presented by Thomson and Hartley (1980), substantiates the presence of negative self-perceptions in the academic realm but further points to additional deficits socially and emotionally. Fifteen learning disabled subjects were compared to a matched group of fifteen normally achieving students between the ages of eight

and ten years old. Utilizing a number of assessment tools the authors depict lower levels of self-esteem for the dyslexic children in terms of general self, social self, and academic self. Inadequacies in the home environment are also cited.

Another study (Rosenthal, 1973) further suggests pervasive deficits in self-concept for learning disabled children. However, Rosenthal's research points to additional variables influencing how much deficit may in fact develop. He points out that children with dyslexia who are from families with awareness and some comprehension of the disorder have more self-esteem than do those from families without such awareness. Rosenthal concludes that in families where dyslexia is a mystery, anxieties, fears, guilts, and false assumptions so distort intrafamilial dynamics as to create feelings of confusion and diminished self-worth in their children.

Smith (1979) lends further support to Rosenthal's position and also provides data that seems to indicate that learning disabled children from families of higher socioeconomic status exhibit greater deficits in self-concept than their counterparts from families of lower socioeconomic status. It is Smith's hypothesis that the discrepancy between parental expectancy and child performance is an important influence on the learning disabled child's self-concept.

The contentions posited by both Rosenthal and Smith are consistent with the theory of Thomas and Chess which stresses the necessity of consistency between the child's temperment and the parental value system. This occurs far less frequently when the child demonstrates tempermental extremes (Kronick, 1978). Kronick suggests that when a "goodness of

fit" between parental value systems and offspring behavior is not achieved, reduced identification is likely to occur on both sides. Such an inconsistency certainly predisposes the learning disabled child to difficulties well beyond the bounds of the home.

Bryan (1974) provides additional observations on the learning disabled child. The author cites that learning disabled children seem less attuned to the affective state of others, more egocentric, and less competent than their peers at perceiving the affective states of others. These deficits lead to difficulties in peer socialization and essential family interaction. In fact, it is Bryan's conclusion after viewing videotaped interactions that learning disabled children are less popular with both peers and adults than controls (Bryan, 1975).

Bruininks (1978) also found through the observation of learning disabled students in regular classrooms that they were significantly less socially accepted than their classmates and were less accurate than their peers in assessing their status in the group setting. Denckla (1978) attributes many of the social ineptitudes noted in these children to subtle neurological difficulties that interfere with social perception. She points to such difficulties as failure to recognize faces, inaccurate interpretation of gestures, failure to respond appropriately to tone of voice, and failure to interpret complex linguistic constructions such as puns and idioms (Cook, 1979). These behaviors contribute to what Siegel (1974) would term a faulty social learning/feedback mechanism.

The available literature seems to clearly point to academic, social, and family deficits in learning disabled children. A number of

contributory factors are undoubtedly at play. In addition to an academic struggle and a host of family factors, other influences such as the type of remediation program employed and teacher attitudes have been suggested as critical variables in the development of the self-concept of the learning disabled (De Brosse, 1977). Surely, other contributory variables have and will be uncovered. However, regardless of the etiology, overall deficits in self-concept and socialization seem supported.

The Learning Disabled Adolescent

As stated, there is not an abundance of literature on the emotional development of learning disabled children. There is even less as one examines adolescent populations. The little research that is on hand seems to indicate that the deficits in self-concept evidenced in learning disabled children continue and spiral into adolescence. Rosenberg and Gaier (1977), utilizing the Coopersmith Self Esteem Inventory (CSEI), compared a group of twenty-three learning disabled seventh graders to a comparable normally achieving group. The results indicate a far more negative sense of "general self" in the learning disabled group. In addition, the disabled group displayed a more negative school or academic self-concept than their normal counterparts. And finally, a significant difference in peer or social self is indicated. Rosenberg and Gaier cite that the adolescent with learning disabilities feels he is less easy to like, less fun to be with, and less popular with his peers than the comparison subjects.

Doreen Kronick, in her 1978 review of the literature in regard to the psychosocial adjustment of learning disabled adolescents, lends

support for the position that learning disabled adolescents evidence psychosocial deficits independent of academic failure and frustration. She points to deficits in organizational skills, shallowness of affect, socialization problems, and poor family relationships for these youth and highlights the need for psychosocial programming for learning disabled adolescents.

More specifically, it is Kronick's position that the residual effects of the deficits noted in child populations are reluctance to express themselves or to try new experiences, difficulty in handling stress or pressure, or immaturity. She notes that some learning disabled adolescents develop successful methods for circumventing their disabilities in many academic, vocational, and social situations. They devise effective strategies whereby their disabilities no longer handicap their functioning. However, many other of these adolescents are unable to meet the social and academic demands of adolescence in a complex society.

Further, Kronick notes that the lack of effective peer relationships cited in learning disabled children peaks in the early to mid-adolescent years. She comments that unless he or she is outstanding athletically or unduly attractive and skilled in nonverbal communication, the learning disabled adolescent is likely to be devalued as a friend. This, of course, comes at a time when the value and utility of peer relationships is so important to continued psychosocial development. Some question has been cast, however, on the depictions of the learning disabled adolescent just presented. Bingham (1980) examined the self esteem of one hundred and twenty (120) males with and without

specific learning disabilities at two levels of development, preadolescent and adolescent. She employed the Coopersmith Self Esteem Inventory. The results point to a less pronounced difference in self-concept between learning disabled and nonlearning disabled students than was evident in a preadolescent group. Bingham concludes that the general crisis of adolescence possible masks the differences that may well persist into adulthood. So, in fact, the results of Bingham's study may not be as inconsistent with the bulk of the literature as it first appears.

The Learning Disabled Adult

Once again, it is my impression that little or no empirical data is available on the self-concept or psychosocial adjustment of learning disabled adults. What there is to be found is of a subjective, descriptive nature. There is general agreement, however, that problems in self-concept and psychosocial adjustment do exist and serve as major life obstacles for learning disabled adults.

Louisa Cook suggests that this assumption makes intuitive sense in light of the particular developmental dilemmas facing the learning disabled. Cook relies on Erikson's depiction of the healthy adult in her analysis (1968). Erikson describes the healthy adult as one who actively masters his environment, who shows a unified personality, who is able to perceive himself correctly, and who is able to perceive the world correctly. These characteristics of maturity are achieved through the accomplishment of adolescent tasks. However, as noted in the previous section, the adolescent with a learning disability is often ill-equipeed to resolve the conflicts of adolescence and to achieve the healthy equilibrium between self needs and societal demands that

successful adulthood entails. (Cook, 1979)

Cook points out that most learning disabled adults have not found the means for acquiring a sense of mastery. Further, she suggests that a unified personality is an extension of the confidence that one's inward sense of self is matched by the continuity of one's meaning for others. The difficulties cited in forming satisfactory peer relationships in childhood and adolescence serve to hinder the development of such a continuity.

Carrying Erikson's depiction even further, the third aspect of a mature personality is the ability to perceive oneself correctly. Cook sees accurate self-perception as the capacity to acknowledge and accept one's strangths and one's vulnerabilities, in a manner that coincides with the perceptions of others. She points out, however, that in her experience the learning disabled are often very one-dimensional in their self-perception and focused on their inadequacy and ineffectance.

Finally, the healthy adult is able to perceive the world correctly. According to Cook, accurate perception of the world includes the perception of the causal relationships between events, the incongruities, paradoxes, and capriciousness of events, and the difference between what one wishes to be so and what is so. Again, for the learning disabled, these perceptions are often troublesome and distorted. It is her conclusion then that the learning disabled come significantly ill-prepared for the challenges of adulthood and that therapeutic efforts limited to academic remediation will be insufficient and ineffective in meeting the varied needs of this population.

Little more is on hand regarding the plight of the learning

disabled adult. De Brosse (1977) states that subjective depictions of their psychosocial adjustment have ranged from "generally possessive of mild emotional disorders of a neurotic type" to "every adult with a learning disability has a psychiatric problem as well". Along this continuum, Anderson (1972) claims to have noted that the minimal brain dysfunctioned adult frequently threatens suicide or makes threats against children and spouse in order to maintain some sense of control or status in the family. This would be consistent with Kronick's suggestion (1978) that the learning disabled often come to adulthood with uncertaincies about expected behavior in interactions and a lack of age appropriate concepts resulting in general unpredictability.

Some additional light is shed on the learning disabled adult by those primarily interested in their impact on family dynamics. Linkowsky and Saposnek (1978) criticize a lack of data dealing with the effects of a parent's dyslexia on the family's functioning and on the emotional development and adjustment of the children in such families. They cite Satir's 1967 hypothesis that if one member of the family is experiencing difficulties then all family members tend to be experiencing difficulties. Through a case presentation, they attempt to lend support to the notion that childhood dyslexia and the vestigial personality traits resulting from childhood learning disabilities which persist into adulthood can have deleterious effects on the emotional development of the dyslexic adult and the entire family. The presentation seems to support the speculation that a learning disabled adult may have difficulty in marriage and parenthood because of his problem in social perception and performance.

Once again, the literature is light in examining the nature of the learning disabled adult. The majority of the research available on the topic is of a highly subjective or theoretical nature. However, it is clearly supportive of the notion that academic and psychosocial deficits persist into adulthood and contribute to a multitude of life difficulties. If indeed this hypothesis holds true when subjected to the rigors of an empirical analysis, this will serve to highlight the importance of continued research on the behalf of these adults and will substantiate Cox's (1977) emphasis on the remediation of associated disorders as an essential component of the overall remediation and compensation needs of learning disabled adults.

In closing, one difficulty in proceeding with an empirical analysis of the self-concept of the learning disabled adult is worthy of discussion. Self-concept research in general is plagued with difficulties in assessment. These difficulties stem from the variety of constructs often measured under the guise of the self-concept. For example, the Coopersmith Self-Esteem Inventory, employed in the earlier cited study by Bingham (1980), assesses five elements of self-esteem as well as a composite measure. A number of other researchers have praised it as a useful measure of self-concept (Alvord and Glass, 1974). What indeed does the scale measure? Internal construct validity is thus an important consideration in this area of research.

Further, a majority of the self-concept measures are self-report devices. Self-report devices are generally recognized as the less reliable of the assessment tools. This suggests real interpretive caution in their application.

Consideration of these difficulties in assessing the self-concept led to the choice of the instrument employed in this study, the Tennessee Self Concept Scale. The Tennessee offers impressive reliability and validity data for a device of this kind which is detailed in the following Methodology Chapter. Additionally, the instrument is quite clear in operationally defining the constructs subsumed under the term self-concept. Also, it is firmly based in self-theory and yields an unusual wealth of information regarding the individual's self-concept (Fitts, 1965). A mor in-depth discussion of these and other methodological concerns follows.

CHAPTER III

METHODOLOGY

Research Design

The study at hand was designed to compare a group of learning disabled adults to a group of non-learning disabled adults on the basis of self-concept. The research design is retrospective in nature. Both the control and experimental groups were drawn from the Massachusetts Community College System and a private post secondary vocational program.

The subjects were exposed to two experimental devices. The first is a personal data form/questionnaire designed to ascertain personal information pertinent to group inclusion and as a measure of academic self-concept (Appendix A). The second is the Tennessee Self-Concept Scale, a standardized measure of self-concept (Appendix B).

A further differentiation was also based on the information provided on the personal data form. It was intended to compare differences in self-concept in the experimental group as a function of age of identification. Two groups were intended, an early and late identified. In fact, as I will discuss later in the chapter, three levels of age of identification were actually established.

This generally describes the overall design of the research. A more detailed discussion of the variables described, the subjects, the assessment devices, and procedures will be provided in the following sections. The remainder of the chapter will be organized into four sections: Hypothesis, Subjects, Instruments, and Procedure.

Hypothesis

As stated earlier, a review of the learning disabilities literature indicates that there is a serious deficiency in research, theory, and remediation techniques for learning disabled adults. Further, Cox (1977) suggests that remediation for this traditionally unserved population requires three areas of intervention: (1) identification, (2) individualized adult education, and (3) remediation of associated disorders. The subject of associated disorders suggested by Cox leaves the greatest gap in the literature. This then is my focus. It seems likely that adults who have spent a lifetime failing in academic and related pursuits are especially subject to emotional distress, personality disorders, and difficulties in social behavior. This assumption leads me to the following hypotheses:

Hypothesis I: Learning disabled adults will exhibit more indications of negative self-concept in general than a non-learning disabled comparison group, as measured by a personal data form and the Tennessee Self Concept Scale.

Hypothesis II: Learning disabled adults will express less self satisfaction than a non-learning disabled group.

Hypothesis III: Learning disabled adults will display a more negative view of physical self than a non-learning disabled group.

Hypothesis IV: As a group, the learning disabled sample will present a more negative sense of moral-ethical self than a non-learning disabled group.

Hypothesis V: The learning disabled sample will display more negative indications of personal self (personal worth) than the non-learning

disabled sample.

Hypothesis VI: Learning disabled adults will exhibit a more negative view of family self than a non-learning disabled comparison group.

Hypothesis VII: The learning disabled group will present a more negative sense of social self than the non-learning disabled group.

Hypothesis VIII: The learning disabled group will report more negative indications of academic or school self than the non-learning disabled group.

Hypothesis IX: The learning disabled group will present a greater number of deviant features (assumed to be indicative of psychological disturbance) than the non-learning disabled group.

In contrasting earlier vs. later identified learning disabled adults, it is hypothesized that:

Hypothesis X: The later identified group will exhibit more negative self-concept in general than each earlier identified group.

Hypothesis XI: The later identified group will exhibit less self satisfaction (self acceptance) than the earlier identified adults.

Hypothesis XII: The later identified group will exhibit greater conflict in self perception than the earlier identified subjects.

Should these hypotheses hold true, this would provide a foundation for incorporating attention to self concept into any program attempting to meet the needs of these adults. Further, should differences in self concept be identified in earlier vs. later identified learning disabled adults, some impetus will be provided for early identification of these learners.

Subjects

As stated earlier in the design section, all subjects were drawn from the eastern colleges of the Massachusetts Community College System and a private post-secondary vocational program in the Boston area. The final control group is a sample of thirty-seven (N=37) students drawn from two sections of a Principles of Psychology course at Bunker Hill Community College. The course is a general requirement for nearly all programs at the college and therefore represents a good cross section of the entire institutional student population. The group is comprised of seventeen (17) males and twenty (20) females (Figure 1.). The ages of the subjects range from eighteen (18) years to twenty-six (26) years (Figure 2.). The majority of the control group has completed the twelfth grade (26). Nine (9) completed a freshman year; one (1) a sophomore year, and one (1) possesses a General Education Diploma (G.E.D.). (Figure 3.).

The final experimental group was drawn from Bunker Hill Community College (19), Cape Cod Community College (1), Massasoit Community College (3), Middlesex Community College (1), North Shore Community College (6), and a post-secondary vocational school in Newton, Massachusetts (7). This is a total of thirty-four subjects (N=34). The group is composed of sixteen (16) males and fourteen (14) females (Figure 1.). The ages of the experimental subjects range from eighteen (18) years to forty-nine (49) years (Figure 2.). Like the control group, the majority of the subjects completed the twelfth grade (16). Six (6) completed a freshman year, one (1) completed a G.E.D. and six (6) subjects

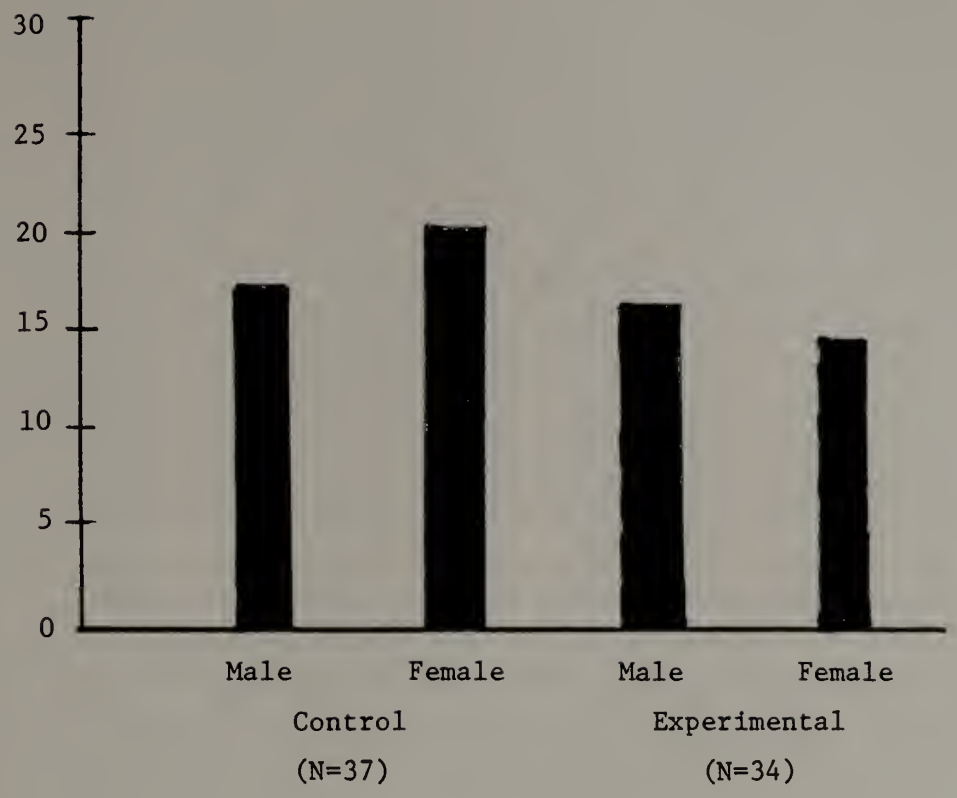

Figure 1. Composition of Control and Experimental Groups According to Sex.

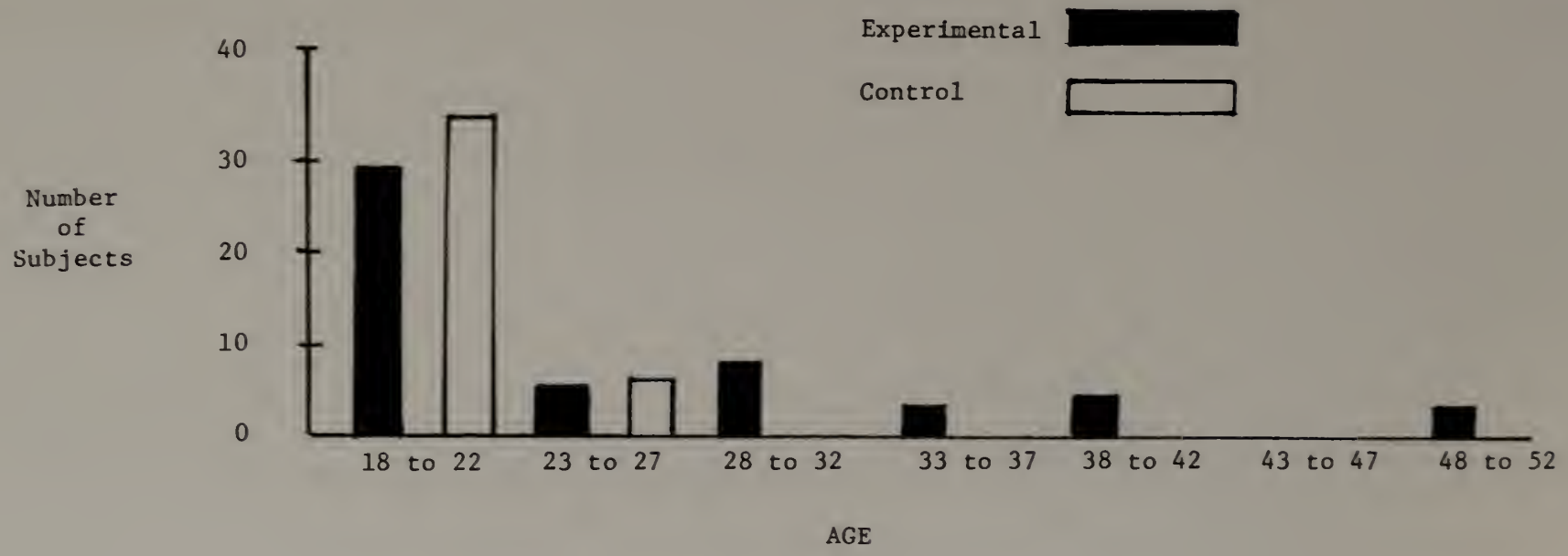

Figure 2. Comparison of age distributions for control and experimental group subjects.

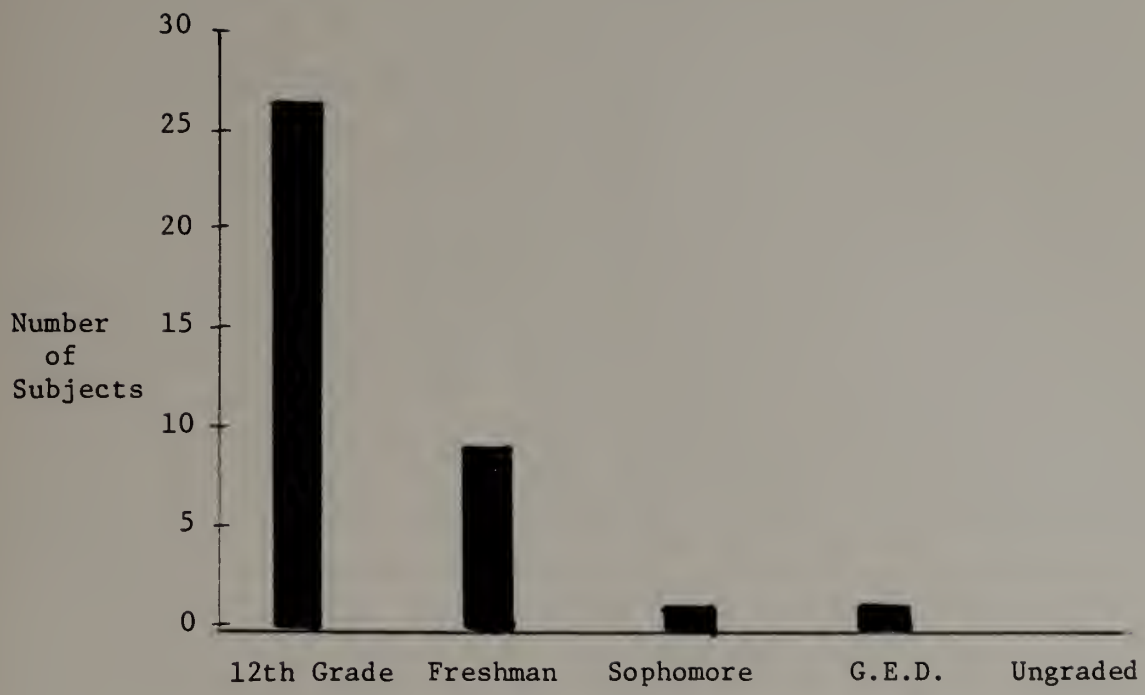

Figure 3. Level of Education Completed for Control Group Subjects.

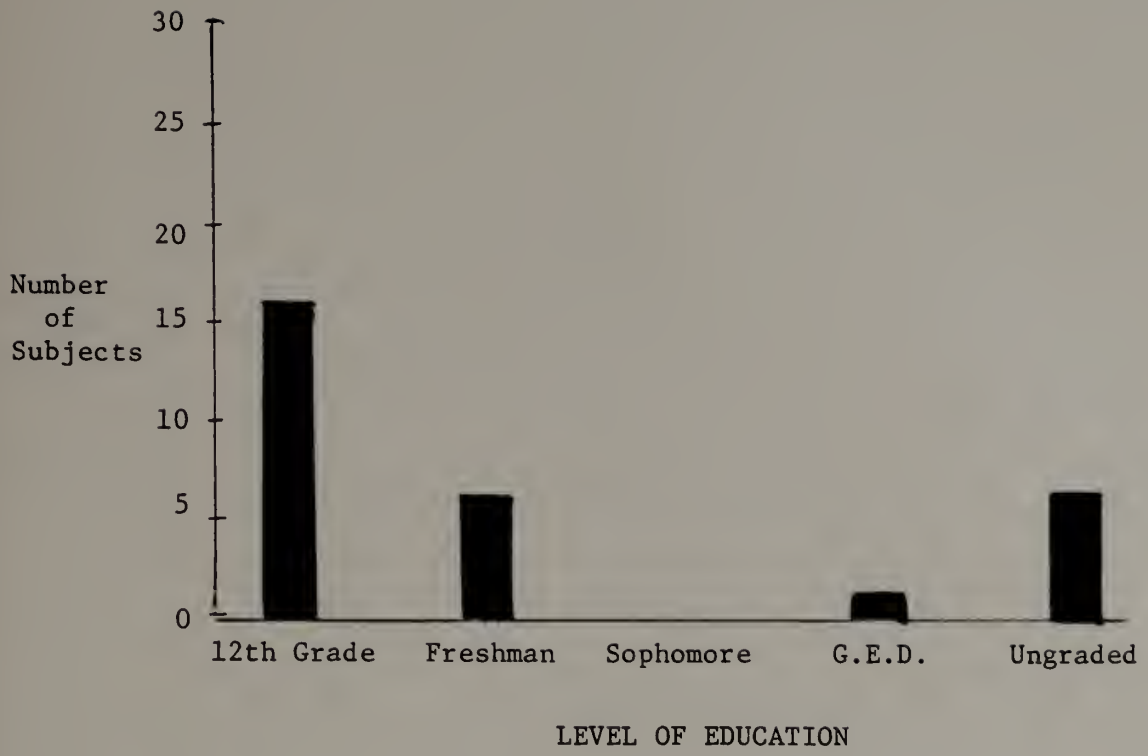

Figure 4. Level of Education Completed for Experimental Group Subjects.

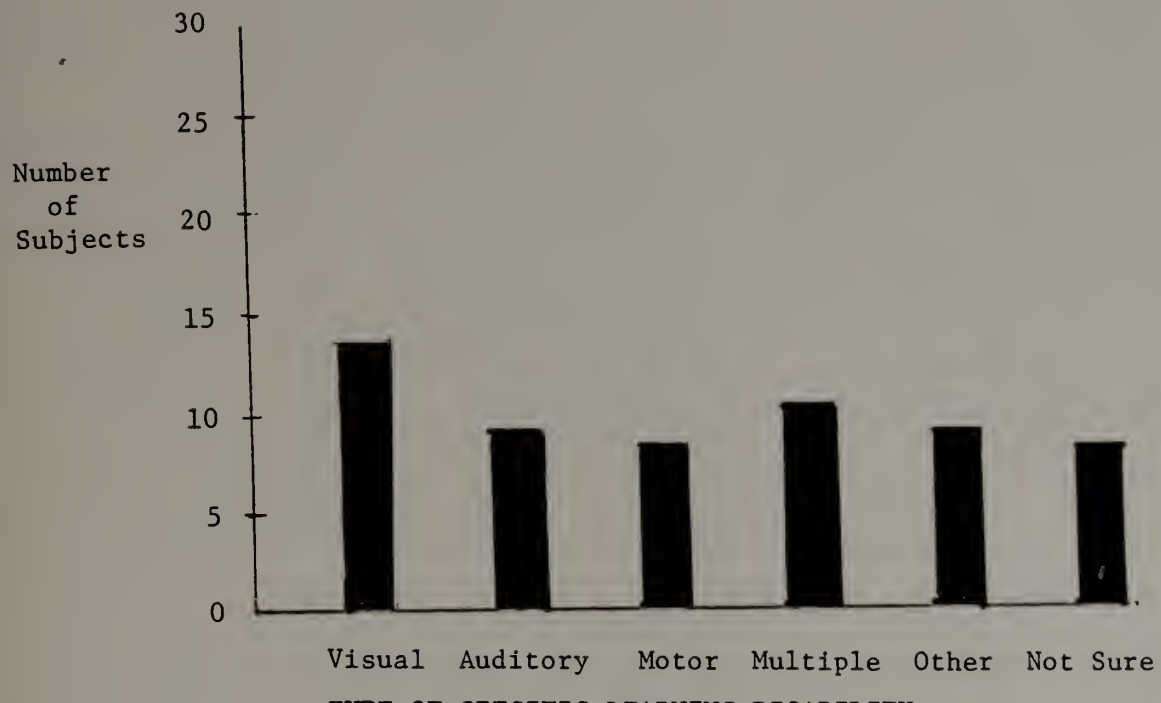

Figure 5. Distribution of Experimental Group Subjects According to Type of Specific Learning Disability Reported

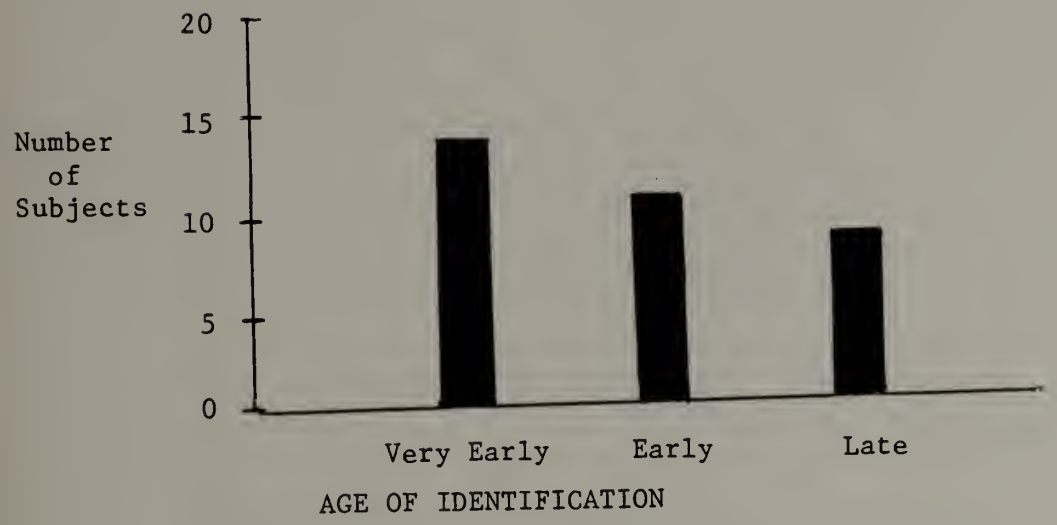

Figure 6. Distribution of experimental subjects according to age of identification as learning disabled.

report themselves as having been ungraded (Figure 4.). A variety of specific learning disabilities are represented including visual (14), auditory (9), motor (8), and multiple disabilities (11). Nine (9) subjects reported their disability as "other" and eight (8) as "not sure" (Figure 5.).

The experimental group was divided according to age or grade of identification. Three discrete groups were formed: "Very Early Identified", identified prior to Grade Two (fourteen [14] subjects); "Early Identified", identified in Grades Two through Seven (eleven [11] subjects); and "Late Identified", identified in Grades Eight through adulthood (nine [9] subjects) (Figure 6.). A more detailed discussion of how subjects were contacted at the various institutions will be treated later in this chapter as a procedural issue.

Instruments

Two devices were employed in the assessment process. The first is a personal data form of my own devise. It relies on self-report to extablish whether the client meets the criteria to be classified as a learning disabled subject. It also provides the data necessary to distinguish between earlier and later identified learning disabled adults. The form is also designed to gain some specific measure of the subject's academic self-concept. The device provides a sense of how familiar subjects are with the nature of their handicap. And finally, it establishes certain routine personal information essential to an examination of the composition of both the control and experimental groups (Appendix A.).

In addition to the personal data form a standardized measure of

self-concept was administered, The Tennessee Self Concept Scale, Clinical and Research Form was chosen (Appendix B). The Scale consists of 100 self-descriptive statements which the subject uses to portray his own picture of himself. It is self-administering for either individuals or groups and can be used with subjects age 12 or higher and having at least a sixth grade reading level. For subjects whose disability interferes with self-administration, an individual auditory administration was pre-arranged with the researcher. The Scale provides measures of a subject's physical self, moral-ethical self, personal self, family self and social self. In addition, measures of self-criticism, identity, self-satisfaction, and overall self-esteem are provided (Fitts, 1965). Other empirical scales not directly related to the stated hypotheses are also derived. These scales identify characteristics associated with specific psychological disorders.

Psychometric data for the Scale is impressive for an instrument of this nature. The standardization group from which the norms were developed was a broad sample of 626 people representing a cross section of various parts of the country, age range, sex, race, and social, intellectual and educational levels. The test-retest reliability coefficients of all major scores are reported and fall mostly in the .80 to .90 range.

Validation data on the Scale is also readily available. In terms of content validity, the final items were selected by seven clinical psychologists who were asked to classify each item as to its fit with defined constructs. The final items included only those on which the judges showed perfect agreement. Further, the Scale correlates highly in predictable directions with other personality measures such as the

MMPI, Taylor Anxiety Scale, Cornell Medical Index, Inventory of Feelings, and others. And finally, research indicates the scale is useful in discriminating groups according to various pathologies and is sensitive to personality changes under particular conditions (Fitts, 1965).

Procedure

Initially, it was determined that both the control and the total learning disabled group would ideally number forty (N=40) subjects each. Further, in order to control unnecessarily extraneous factors, it was decided to limit the selection of subjects in both the control and experimental groups to the two-year community college setting. The control group was selected and tested first. Two instructors in the Behavioral Science Department at Bunker Hill Community College were interviewed as to the composition of their Principles of Psychology sections. As mentioned earlier in the chapter, this course is a general requirement for almost every program offered at the college and was therefore seen as a representative sampling of the entire institutional population. Of all the sections offered, the two chosen for testing seemed to be the best mix of first and second year students. The students were tested in class on a voluntary basis. They were notified of the testing one week prior to the administration. The sessions were introduced as follows:

> "Research is being conducted to try to gain a better understanding of some of the needs and feelings of learning disabled adults. Very little information is available on this topic.

Your assistance will be valuable in helping us to get an understanding of how to serve their particular needs. The survey is confidential, no name is required. There are two sides to both the questionnaire and the test. A pencil should be used. If you have any questions while doing the items, please feel free to raise your hand. Thank you."

Early in the administration, a question arose as to the nature of a specific learning disability. In explaining "learning disability" to both groups the definition laid down by the National Committee on Handicapped Children was used as a reference guide:

"Children with special learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc. They do not include learning problems which are due primarily to visual, hearing, or motor handicaps, to mental retardation, emotional disturbance, or to environmental disadvantage. (Hallahan and Kauffman, 1976)."

The testing proceeded without further incident with the exception of a few questions strictly of a mechanical nature.

The control subjects were asked to hand in their completed tests and questionnaires directly to the examiner to allow them to ask any questions of a personal nature they may have hesitated to ask in the larger group. A total of forty three (43) control subjects were tested. Of these, six (6) were eliminated. One (1) participant was presumably intoxicated. Two (2) subjects gave obviously facetious responses on the personal data form. Two (2) students alluded to disabilities that did not clearly warrant inclusion in the experimental group, so they were eliminated entirely. One (1) subject indicated a learning disability that warranted his inclusion in the experimental rather than the control group. The final control group numbered thirty-seven (37).

The formation of the experimental group proved more difficult. At Bunker Hill Community College, participants were contacted through Counseling Office files, advertisements in student publications, and a request for referrals in the faculty/staff newsletter. A total of nineteen (19) subjects were contacted and tested. Two additional contacts did not meet the criteria for specific learning disability referred to above.

Seven other community colleges in eastern Massachusetts were contacted. Four of these actually participated in the study. Counselors or learning resource personnel at each of these institutions assumed the responsibility for contacting learning disabled students at their respective schools and for administering the assessment devices. They were instructed to introduce the administration as follows:

> "Research is being conducted to try to gain a better understanding of some of the needs and feelings of learning

disabled adults. Very little information is available on this topic. Your assistance will be valuable in helping others get a better understanding of how to serve your particular needs. The survey is confidential, no name is required. If you have any questions while doing the items, feel free to ask. Thank you!"

Examiners were reminded that both devices were two-sided and should be completed in pencil.

Additionally, a post-secondary vocational school was added to the experimental subject pool. An instructor in the program expressed interest in the research and offered the participation of seven (7) subjects. It was the examiner's impression that these subjects were not dissimilar to the community college population originally sought. As a result, they are included in the learning disabled sample. At the end of the 1981-1982 academic year, thirty-four (34) subjects had been obtained. It was decided to proceed with this number (N=34).

The experimental group was further divided on the basis of age or grade of identification. Originally, it was intended to distinguish two groups, early and late identified. However, responses to item number seven on the personal data form (at what age or grade was your disability discovered?), indicated three groupings, (very early, early, and late identified) lend themselves to a better statistical analysis. Three groupings would also more clearly illustrate the presence of any trend based on age of identification, if indeed any exists.

Finally, the completed personal data forms and the Tennessee Self Concept Scales were numerically coded. This will allow a matchup of

subject's responses on the personal data form to his/her individual results on the Tennessee, should this prove useful at a later time. The completed Tennessee Self Concept Scales were then forwarded to Counselor Recordings and Tests of Nashville, Tennessee for computer scoring and statistical analysis. The personal data forms will be subject to analysis by the examiner. It should be noted that four (4) of the experimental group did not complete the back side of the data form. As a result, the experimental group will number thirty (N=30) in comparing the learning disabled to the non-learning disabled group on the basis of academic self-concept. All other essential personal information on these four subjects is intact. Only a certain amount of subjective material regarding career plan and growing with a disability is additionally lost.

CHAPTER IV

ANALYSIS OF THE DATA

The focus of this research is on the self-concept of learning disabled adults. The assumption underlying the stated hypotheses is that adults who have spent a lifetime failing in academic and related pursuits are especially subject to emotional distress, personality disorders, and difficulties in social behavior. The resulting data will be presented in four separate sections. The first section will present the data related to those hypotheses contrasting learning disabled and non-learning disabled subjects. Additional findings relevant to a comparison of these two groups will also be presented. The second section will present the data relevant to a comparison of the experimental subjects structured according to age of identification. The third section will then outline some additional findings in the experimental group based on the type of learning disability reported by the subjects. The final section provides some descriptive data yielded by the Personal Data Form indicative of certain trends in the learning disabled groups.

A Comparison of Learning Disabled and Non-Learning Disabled Adults

We will first examine the stated hypotheses before moving on to additional findings relevant to a comparison of the experimental and control group.

Hypothesis I: Learning disabled adults will exhibit more indications

of negative self-esteem in general than a non-learning disabled comparison group as measured by the Tennessee Self Concept Scale. More specifically, four of the Tennessee's individual scales were examined as representative of overall self-esteem. The Total P Score, reflective of overall level of self-esteem indicated no significant difference whatsoever between the experimental and control group. The Total P Score is a composite of three other scales: Row 1 P Score (Identity), Row 2 P Score (Self Satisfaction), and Row 3 P Score (Behavior). Analysis of the data also reveals no significant differences between groups on any of these three variables. (See Table 1).

TABLE 1

A Comparison of Experimental and Control Group Means on the Tennessee Self Concept Scale, Total P Score, Row 1 P Score, Row 2 P Score, and Row 3 P Score

Scale	Group	N	M	SD	t
Total P Score	Experimental	34	339.853	37.3478	.205613*
	Control	37	338.162	31.3790	
Row 1 P Score	Experimental	34	124.000	12.1131	.320058*
	Control	37	123.162	9.6940	
Row 2 P Score	Experimental	34	106.382	16.7369	-.050283*
	Control	37	106.568	14.1922	
Row 3 P Score	Experimental	34	109.471	11.7273	.379903*
	Control	37	108.432	11.2732	

* $p > .10$ (N.S.)

Hypothesis II: Learning disabled adults will express less self-satisfaction than a non-learning disabled group. As a measure of self-satisfaction, the Self Criticism Score (SC) of the Tennessee Self Concept Scale and the Row 2 P Score (Self Satisfaction) were employed. As previously stated, the Row 2 P Scores reveal no significant difference between groups. However, the SC Scale lends some support to the hypothesis as stated. High scores on the SC Scale generally indicate a normal, healthy openness and capacity for self-criticism. The control group subjects score significantly higher on this scale than the experimental group subjects. This is interpreted as some indication of less self-satisfaction in the learning disabled group. This is somewhat of an intuitive leap in the sense that it is based on the assumption that a lessened tolerance for self-criticism is indicative of less satisfaction. This is indeed open to discussion. (See Table 2).

TABLE 2

A Comparison of Experimental and Control Group Means on the Tennessee Self Concept Scale Self Criticism Score (SC)

Group	N	M	SD	†
Experimental	34	32.941	6.1197	-3.257593*
Control	37	37.324	5.1211	

*$p < .01$

Hypothesis III: Learning disabled adults will display a more negative view of physical self than a non-learning disabled group. The data lends no support to this hypothesis based on analysis of the Tennesee Column A Scores, Physical Self. (See Table 3).

TABLE 3

A comparison of Experimental and Control Group Means on the Tennessee Self Concept Scale Column A Score

Group	N	M	SD	t
Experimental	34	67.559	9.2906	-.790374*
Control	37	69.189	7.9646	

*p $>$ .10 (N.S.)

Hypothesis IV: As a group, the learning disabled sample will present a more negative sense of moral-ethical self than a non-learning disabled group. The Column B Scores, Moral-Ethical Self of the Tennessee were used in this analysis. The data conflicts with the hypothesis as stated just approaching significance. In other words, the learning disabled sample exhibits a somewhat higher degree of moral or ethical self than the control group. Again, however, the noted difference does not quite reach significance. (See Table 4)

Hypothesis V: The learning disabled sample will display more negative indications of personal self (personal worth) than the non-learning disabled sample. The Column C Scores of the Tennessee are designated

as a measure of Personal Self. No significant difference between groups on this dimension is evidenced. The data does not support the hypothesis. (See Table 5).

TABLE 4

A Comparison of Experimental and Control Group Means on the Tennessee Self Concept Scale Column B Score

Group	N	M	SD	t
Experimental	34	70.941	9.2341	1.703341*
Control	37	67.514	7.5484	

*p = .10

TABLE 5

A Comparison of Experimental and Control Group Means on the Tennessee Self Concept Scale Column C Score (Personal Self)

Group	N	M	SD	t
Experimental	34	66.088	10.5841	.399837*
Control	37	65.135	9.3961	

*p $\geq$ .10 (N.S.)

Hypothesis VI: Learning disabled adults will exhibit a more negative view of family self than a non-learning disabled comparison group. A comparison of the Tennessee Column D Scores (Family Self) reveals no significant difference between the experimental and control group. The hypothesis is not supported. (See Table 6).

TABLE 6

A Comparison of Experimental and Control Group Means on the Tennessee Self Concept Scale Column D Score (Family Self)

Group	N	M	SD	t
Experimental	34	68.088	8.2659	-.622906*
Control	37	69.243	7.2702	

*p > .10 (N.S.)

Hypothesis VII: The learning disabled group will present a more negative sense of social self than the non-learning disabled group. Again, the data does not support the hypothesis. The Column E Scores (Social Self) of the Tennessee indicate no significant difference between the two groups. (See Table 7).

TABLE 7

A Comparison of Experimental and Control Group Means on the Tennessee Self Concept Scale, Column E Score

Group	N	M	SD	t
Experimental	34	67.176	9.3791	.045358*
Control	37	67.081	8.1594	

*p > .10 (N.S.)

Hypothesis VIII: The learning disabled group will report more negative indications of academic or school self than the non-learning disabled group. The data yielded by responses to item #12 of the Personal Data Form indicates a highly significant difference between experimental and control group subjects on the dimension of academic self-concept. The data clearly supports the stated hypothesis. (See Table 8).

TABLE 8

A Comparison of Experimental and Control Group Means on the Academic Self Scale

Group	N	M	SD	t
Experimental	30	3.36	.964307	
Control	37	3.78	.604493	2.081804*

*p < .05

Hypothesis IX: The learning disabled group will present a greater number of deviant features (assumed to be indicative of psychological disturbance) than the non-learning disabled group. As measures of deviant features, the six empirical scales of the Tennessee were examined: The Defensive Positive Scale (DP), the General Maladjustment Scale (GM), The Psychosis Scale (PSY), The Personality Disorder Scale (PD), The Neurosis Scale (N), and The Personality Integration Scale (PI). All the above scales, with the exception of the Neurosis Scale, support the stated hypothesis. Further, three of the scales, the DP, PSY, and PI Scales indicate differences between the two groups that may be described as highly significant. The DP and PD Scales clearly indicate trends in the expected direction but do not quite reach significance. (See Table 9)

Further support for the hypothesis is provided by the Number of Deviant Signs Scale (NDS) of the Tennessee. The data reveals a significantly greater number of deviant signs in the learning disabled group than in the non-learning disabled control group. (See Table 10)

A thorough analysis of the data revealed additional differences between the experimental and control group not specifically related to the stated hypotheses but nevertheless worthy of report. One finding particularly worthy of mention is a significantly greater amount of confusion or conflict within individual areas of self-perception as well as in overall self-perception, in the experimental group as compared to the control group. This difference exhibits significance over two of the Tennessee scales: a measure of the extent to which an individual's responses to positive items differ from or conflict with, his responses

TABLE 9

A Comparison of Experimental and Control Group Means on Tennessee Self Concept Scale Empirical Scales: Defensive Positive Scale (DP), General Maladjustment Scale (GM), Psychosis Scale (PSY), Personality Disorder Scale (PD), Neurosis Scale (N)

Scale	Group	M	SD	t	Significance
DP	Experimental	63.324	12.2567	3.5299	$p < .01$
	Control	53.595	10.8435		
GM (inverse scale)	Experimental	91.294	11.6996	-1.3646	$p = .18$ (N.S.)
	Control	94.568	8.9769		
PSY	Experimental	54.176	6.2642	4.0296	$p < .001$
	Control	48.135	6.3603		
PD (Inverse scale)	Experimental	75.559	12.8728	1.5236	$p = .13$ (N.S.)
	Control	71.459	9.3589		
N	Experimental	83.382	12.8086	.5654	$p > .10$ (N.S.)
	Control	81.865	9.3665		
PI	Experimental	6.706	3.4070	-3.1112	$p < .01$
	Control	9.108	3.0982		

to negative items in the same area of self perception (NET CONFLICT Scores) and a measure of confusion, contradiction, and general conflict in self-perception (Total Conflict Scores). (See Table 11)

TABLE 10

A Comparison of Experimental and Control Group Means on the Tennessee Self Concept Scale NDS Score

Group	N	M	SD	t
Experimental	34	28.559	21.5536	3.770616*
Control	37	13.081	10.8586	

*$p < .001$

TABLE 11

A Comparison of Experimental and Control Group Means on the Tennessee Self Concept Scale Net Conflict Score and Total Conflict Score

Score	Group	N	M	SD	t	Significance
Net Conflict	Experimental	34	10.794	20.2302	3.243592	$p < .01$
	Control	37	3.568	16.7341		
Total Conflict	Experimental	34	39.735	13.5430	2.275596	$p < .05$
	Control	37	33.622	8.2103		

Another significant difference between the experimental and control group is evident on the Tennessee DST D Score. This is offered as a measure of certainty in self-perception. The learning disabled group scored significantly higher than the control group on this variable. This difference warrants careful consideration as one moves toward impacting change in self-concept or self-perception in learning disabled adults. (See Table 12).

TABLE 12

A Comparison of Experimental and Control Group Means on the Tennessee Self Concept Scale DST D Score

Group	N	M	SD	t
Experimental	34	125.382	31.4209	2.80644*
Control	37	113.865	24.0811	

*$p < .01$

One final difference between groups is mentionable. A comparison of the Tennessee True-False Ratios (T/F) for the two groups suggests a significant difference between learning disabled and non-learning disabled subjects. The higher Score for the experimental group may be suggestive of a greater tendency on the part of the learning disabled group to achieve self-definition or self-description by focusing on what they are and relatively unable to accomplish the same thing by eliminating or rejecting what they are not. This is indeed a subtle and highly theoretical distinction. (See Table 13).

TABLE 13

A Comparison of Experimental and Control Group Means on the Tennessee Self Concept Scale T/F Score

Group	N	M	SD	t
Experimental	34	1.409	.4988	2.833007*
Control	37	1.106	.3905	

*$p < .01$

In summary, a comparison of the learning disabled to the non-learning disabled group does not support the hypotheses that deficits in aspects of the self-concept noted in child and adolescent populations persist into adulthood. Deficits were not found in family, personal, moral, physical, or social self. This may be related to the composition of the experimental group. Perhaps those learning disabled adults who approach higher education are those who have compensated in some fashion for their deficits and achieved a better sense of overall self worth.

However, deficits were noted on some of the Tennessee empirical scales. Significant differences were noted on the Defensive Scale, the Psychosis Scale, and Personality Integration. Also, trends in the same direction were noted on the General Maladjustment Scale and the Personality Disorder Scale. At first glance, this seems somehow inconsistent with the results on the direct self scales. However, the empirical scales tend to measure sometimes similar constructs in a more subtle way Perhaps difficulties persist into adulthood which are on a more uncons-

scious level or subject to some level of denial.

Additional deficits are cited. The learning disabled indicate greater conflict or confusion in their self-perception, consistent with the above comments. Also, there seems to be a greater tendency on their part to over emphasize their positive qualities and not realistically appraise their negative. Complicating efforts to impact this perception is also greater certainty in self-perception.

Finally, the learning disabled exhibit a highly significant deficit in academic self-concept. This indeed persists into adulthood. This is not so surprising when one considers that academic tasks have been some of the most frustrating for the learning disabled. This deficit in self-concept may well pose a threat to success in the Community College environment if not impacted.

In closing, the reader is referred to a graphic representation of the overall comparison of experimental and control group scores on the various scales of the Tennessee Self Concept Scale. (See Figure 7).

An Analysis of Experimental Group Data As a Function of Age of Identification

Following an analysis of the data based on a comparison of experimental and control group subjects, the experimental group data was structured according to age or grade of identification. Three groups were discerned: Very Early Identified (N=14), Early Identified (N=11), and Late Identified (N=9). The data was then subjected to simple analysis of variances. Three of the earlier stated hypotheses were based on these groupings.

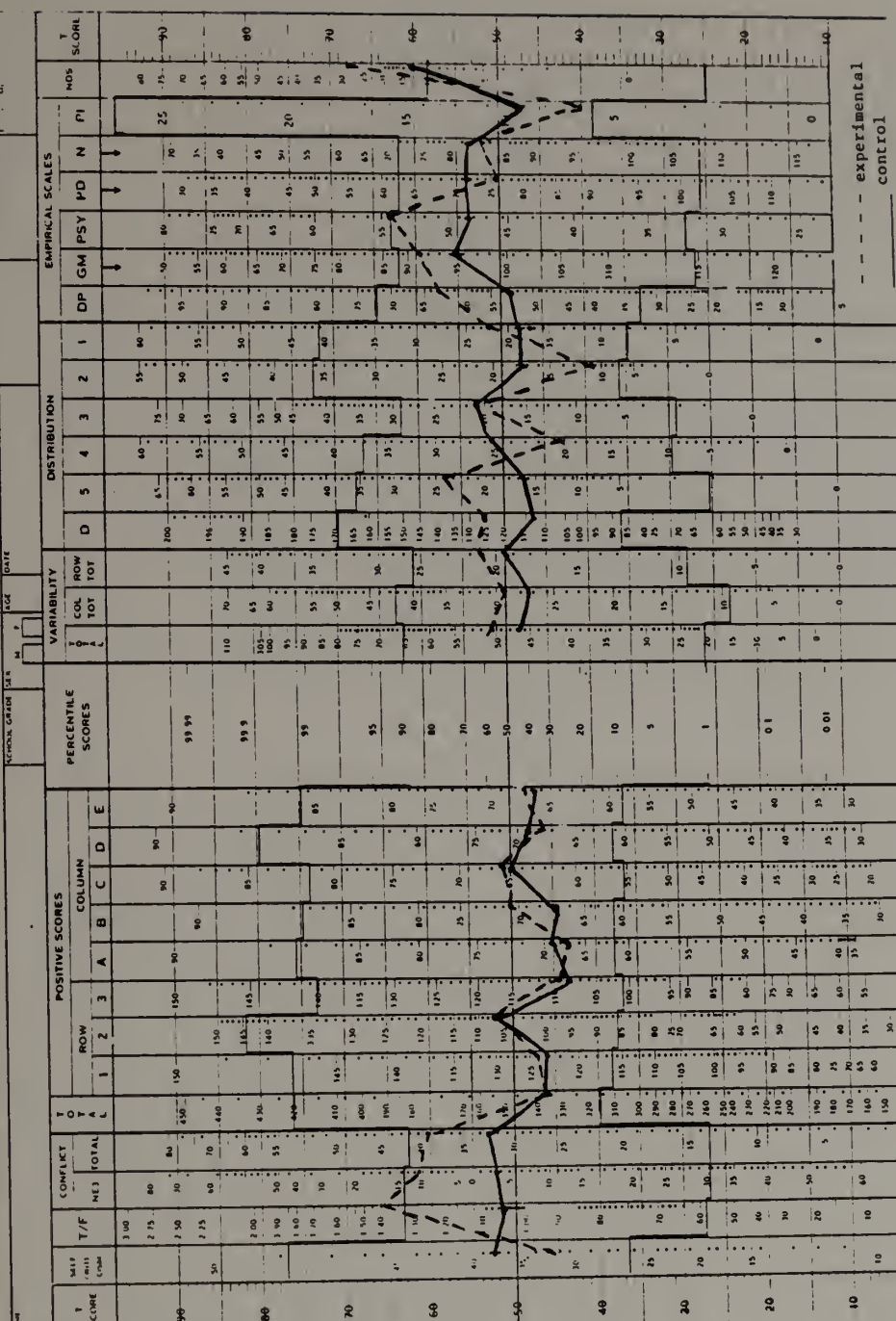

Figure 7. A Comparison of Experimental and Control Group Scores on the Scales of the Tennessee Self Concept Scale.

Hypothesis X: The later identified group will exhibit more negative self-esteem in general than each earlier identified group. As a measure of self-esteem the Tennessee Self Concept Scale Row 1 P Score (Identity) Row 2 P Score (Self-Satisfaction, Row 3 P Score (Behavior), and the Total P Score, a composite of the Row P Scores, were analyzed. No significant differences in self-esteem are supported by an analysis of variance of the group data.

Hypothesis XI: The later identified group will exhibit less self-satisfaction (self-acceptance) than the earlier identified adults. As a measure of self-satisfaction, two of the Tennessee Scales were employed, the Self-Criticism Score (SC) and the Row 2 P Score (Self-Satisfaction). As stated under the previous hypothesis, the Row 2 P Scores reveal no significant differences between the three groups. The SC Scores also reveal no significant differences between groups. The hypothesis is not supported by an analysis of the data.

Hypothesis XII: The later identified group will exhibit greater conflice in self-perception than the earlier identified subjects. The Tennessee Net Conflict and Total Conflict Scores are utilized as measures of conflict in self-perception. As stated earlier in the chapter, Net Conflict Scores provide a measure of the extent to which an individual's responses to positive items differ from, or conflict with, his responses to negative items in the same area of self-perception. The Total Conflict Score is indicative of confusion, contradiction, and general conflict in overall self-perception. The differences in mean scores on the Net C Scale over the three groups is not necessarily supportive of the hypothesis

but enlightening. The trend seems clear that the later one is identified the greater the tendency to over-deny one's negative attributes. Inversely, the earlier one is identified the easier it is to accept one's negative qualities while maintaining a sense of one's positive qualities as well. Perhaps a trend toward over emphasis of the positive is indicated the earlier one is identified. The means for the Very Early, Early, and Late Identified Groups are 18.786, 10.455, and -1.222 respectively. (See Table 14).

TABLE 14

Analysis of Variance Data Over the Age of Identification Groups on the Net C Score of the Tennessee Self Concept Scale

Source		df	Means	F ($=MS_B/MS_W$)
Between	2194.91885	2	18.786	
Within	11310.64	31	10.455	3.007897*
Total	13505.5588	33	-1.222	

*$p > .10$

The Total Conflict Scores for the three groups also lends some support to the hypothesis, although the nature of the between group differences is not as clear as one might expect. There is a significant difference in Total Conflict Scores over the three groups. The difference between the Early and Late Identified subjects is in the

expected direction, the later group exhibiting greater overall conflict in self-perception. However, contrary to the hypothesis the Very Early Identified Group exhibits the highest amount of conflict in self-perception. This will be subject to later discussion, but perhaps a severity of disability factor is surfacing as a confounding variable. The Very Early, Early, and Late Identified mean scores on the Total Conflict Scale are 47.357, 33.545, and 35.444 respectively. (See Table 15).

TABLE 15

Analysis of Variance Data Over the Age of Identification Groups on the Total Conflict Score of the Tennessee Self Concept Scale

Source		df	Means	$F(=MS_B/MS_W)$
Between	1400-45387	2	47.357	
Within	4652.16374	31	33.545	4.666008*
Total	6052.61761	33	35.444	

*$p < .025$

Overall analysis of the data revealed additional differences between the groups based on age of identification that are not specifically related to the stated hypotheses. A significant difference between groups is evident on the Tennessee Total V Score. The Total V Score represents the amount of variability, or inconsistency, in self-perception for the entire record. High scores are indicative of variability or lack of integration in self-perception. The differences between groups

reflect a trend toward less unity or integration of perception, the earlier one is identified as learning disabled. The Very Early, Early, and Late Identified mean scores are 56.286, 46.273, and 45.889 respectively. (See Table 16).

Also evident are significant between group differences on the Tennessee Distributional Score (D). As mentioned earlier the D Score is offered as a measure of certainty about the way one sees himself. The data again reveals a clear trend toward less certainty in self-perception the later one is identified. Later discussion will offer this observation as an incentive for early identification of the learning disabled and as a consideration in working with the late identified population. The Very Early Identified mean score is 136.214, the Early Identified 129.000, and the Late Identified 104-111. (See Table 17).

TABLE 16

Analysis of Variance Data Over the Age of Identification Groups on the Total V Score of the Tennessee Self Concept Scale

Source		df	Means	$F(=MS_B/MS_W)$
Between	1551.57868	2	56.286	
Within	6707.03891	31	46.273	3.585706*
Total	8258.61759	33	45.889	

*$p < .05$

TABLE 17

Analysis of Variance Data Over the Age of Identification Groups on the D Score of the Tennessee Self Concept Scale

Source		df	Means	$F(=MS_B/MS_W)$
Between	5858.78363	2	136.214	
Within	26721.2459	31	129.000	3.398462*
Total	32580.0295	33	104.111	

*$p < .05$

Finally, of particular interest are significant differences between groups on two of the Tennessee Self Concept Scale empirical scales: The Neurosis Scale (N) and the Personality Integration Scale (PI). The mean scores on N Scale are 85.143, 89.273, and 73.444 for the Very Early, Early, and Late Identified Groups respectively. The mean scores on the PI Scale are 5.000, 7.727, and 8.111 in the same order. Also a significant difference is noted on the Number of Deviant Signs Score (NDS). The N score is an inverse scale. The Late Identified Group exhibits the greatest number of neurotic indications over the three groups and clearly the greatest between group variance is evidenced in comparing this Late Identified Group to either of the earlier identified groups. However, the trend is not clear throughout. The Very Early Group exhibits greater neurotic indicators than the Early Group. However, the variance between the two groups hardly approaches significance. The difference that is evidenced may again be attributed to a severity of disability factor or

simply a statistical artifact. The mean scores for the NDS Scale are 39.857, 21.000, and 20.222 over the Very Early, Early, and Late Identified Groups. (See Tables 18, 19 and 20).

TABLE 18

Analysis of Variance Data Over the Age of Identification Groups on the Neurosis Scale of The Tennessee Self Concept Scale

Source		df	Means	$F(=MS_B/MS_W)$
Between	1313.91103	2	85.143	
Within	4100.1181	31	89.273	4.967082*
Total	5414.02913	33	73.444	

*$P < .025$

TABLE 19

Analysis of Variance Data Over the Age of Identification Groups on the Personality Integration Scale of the Tennessee Self Concept Scale

Source		df	Means	$F(=MS_B/MS_W)$
Between	69.9881172	2	5.000	
Within	313.070707	31	7.727	3.465082*
Total	383.058824	33	8.111	

*$p < .05$

TABLE 20

Analysis of Variance Data Over the Age of Identification Groups on the NDS Scale of the Tennessee Self Concept Scale

Source		df	Means	$F(=MS_B/MS_W)$
Between	3427.27919	2	39.857	
Within	12648.6032	31	21.000	4.199897*
Total	16075.8823	33	20.222	

*$p < .025$

In Summary, the expected differences in self-esteem, self-satisfaction, and conflict in self-perception over the age of identification groups were not supported. The results are undoubtedly confounded by severity of disability. However, other noteworthy differences were revealed.

The earlier identified subjects show much greater conflict or confusion in self-perception than those later identified. They also show greater certainty in their self-perceptions. The earlier identified further exhibit a greater number of deviant signs on the overall profile than those later identified. On the other hand, those later identified score higher on the Neurosis (N) Scale. Again, severity of disability surely impacts these findings. The reader is referred to a graphic representation of the overall mean scores on the various scales of the Tennessee Self Concept Scale over the three groups based on age or grade of identification. (See Figure 8).

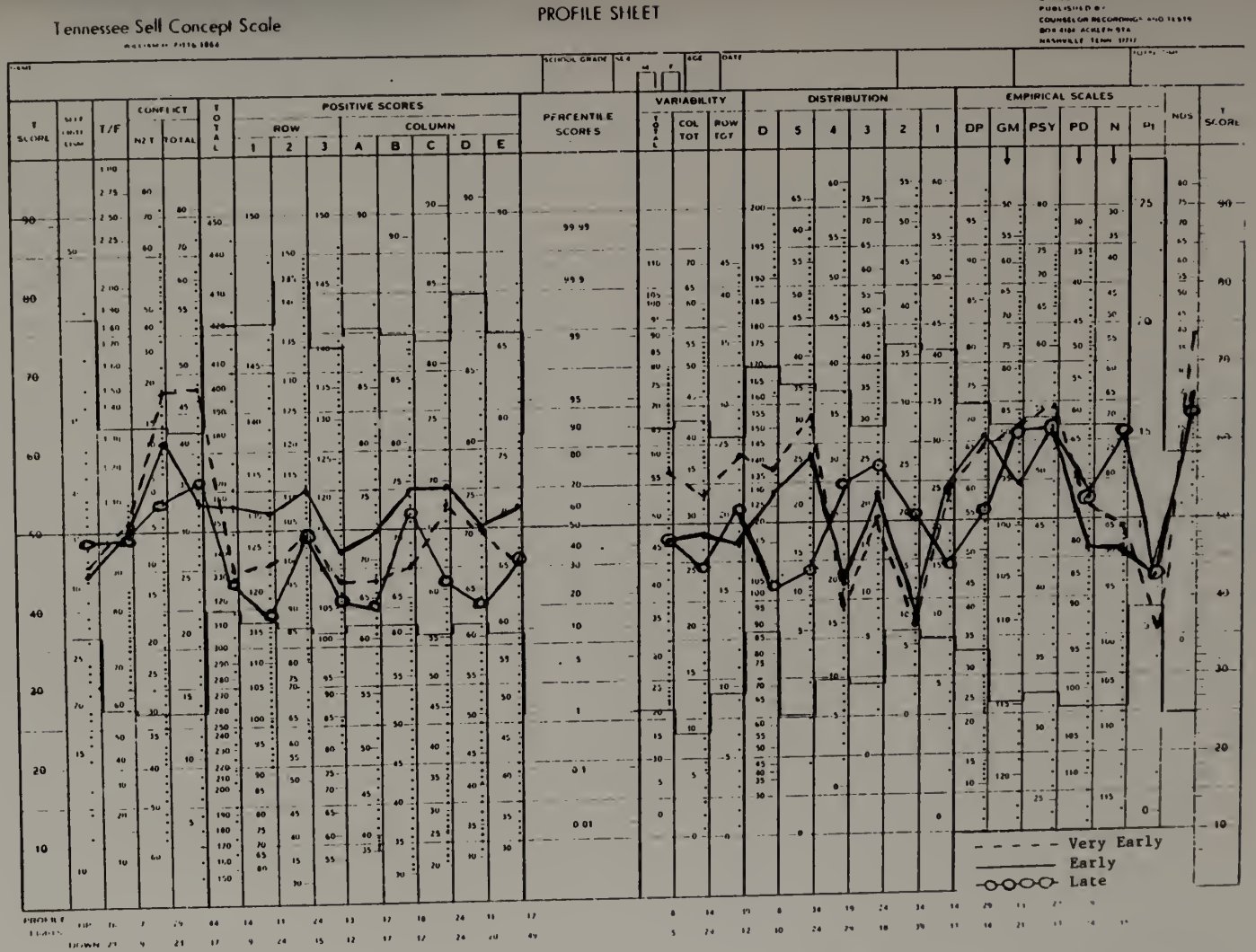

Figure 8. A comparison of the scores on the scales of the Tennessee Self Concept Scale over the three groups based on age or grade of identification.

An Analysis of the Data As a Function of Type of Learning Disability

Although not specifically related to any of the initially stated hypotheses, the data was restructured along the dimension of type of disability as reported by the subjects on the Personal Data Form. Five groups were established: Visual (V), Auditory (A), Motor (M), Multiple (Mult), and Unspecified (U). The subsequent analysis of the data revealed few differences between groups that approached any level of significance. However, the analysis reveals a significant between group variance on the Tennessee Column Total Variability Score. This score represents the degree of variability in column scores representative of physical self, moral self, personal self, family self, and social self. The greatest amount of variability is evident in those subjects that report themselves as handicapped in motor areas. This group is followed by the auditorily handicapped. The unspecified group, multiply handicapped, and visually handicapped follow respectively. However, differences in between group variance in these latter three groups hardly approach significance. (See Table 21).

One further between group distinction was clearly evident along the dimension of type of disability. An analysis of variance yields a highly significant difference on the results of the Academic or School Self Scale of the Personal Data Form. The lowest mean score is exhibited by the group unable to specify their disability. This

TABLE 21

Analysis of Variance Data Over the Type of Disability Groups on the Column Total Variability Score of the Tennessee Self Concept Scale

Source		df	Means	$F(=MS_B/MS_W)$
Between	703.638363	4	(V)=25.1666667	
Within	1777.89103	29	(B)=32.25	2.869342*
Total	2481.52939	33	(M)=42	
			(Mult)=26.76922308	
			(U)=29.5	

*p < .05

TABLE 22

Analysis of Variance Data Over the Type of Disability Groups on the Academic or School Self Scale of the Personal Data Form

Source		df	Means	$F(=MS_B MS_W)$
Between	14.51875	4	(V)=3.25	
Within	13.4479167	29	(A)=3.875	6.747676*
Total	27.9666667	33	(M)=4.3333	
			(Mult)=3.5	
			(U)=3.0625	

*p < .005

group is followed by the visually handicapped, the multiply handicapped, the auditorily handicapped, and the motor handicapped respectively. These differences will be subject to later discussion. (See Table 22).

In summary, the impact of type of disability on the data was investigated. Two observations are notable. First, those describing a motor handicap depict the greatest variability between different aspects of the self-concept. Second, those experimental subjects reporting unfamiliarity with the specific nature of their disability exhibit greater deficits in their academic self-concept. The visually handicapped also report greater deficits in this same area than the other handicapped groups. This result may be a comment on the nature or effectiveness of the type of support offered to different kinds of learning disabled students. However, one caution in interpreting these results is appropriate. The research relies on self-report in establishing type of disability. The results are therefore only as reliable as the subject's understanding of his/her disability and their willingness to report it.

Additional Experimental Group Trends Based on an Analysis of the Personal Data Form

A number of trends relative to age or grade of identification were noted on the Personal Data Forms based on the three groupings earlier described. One interesting trend is a slight but noticeable tendency for males to be identified at an earlier age than females. This trend may also be a function of severity of disability or incidence. Bannatyne

(1971) cites that dyslexia occurs more in boys than girls. A ratio of 3:1 in mild cases and 10:1 in severe cases is noted. (See Figure 9).

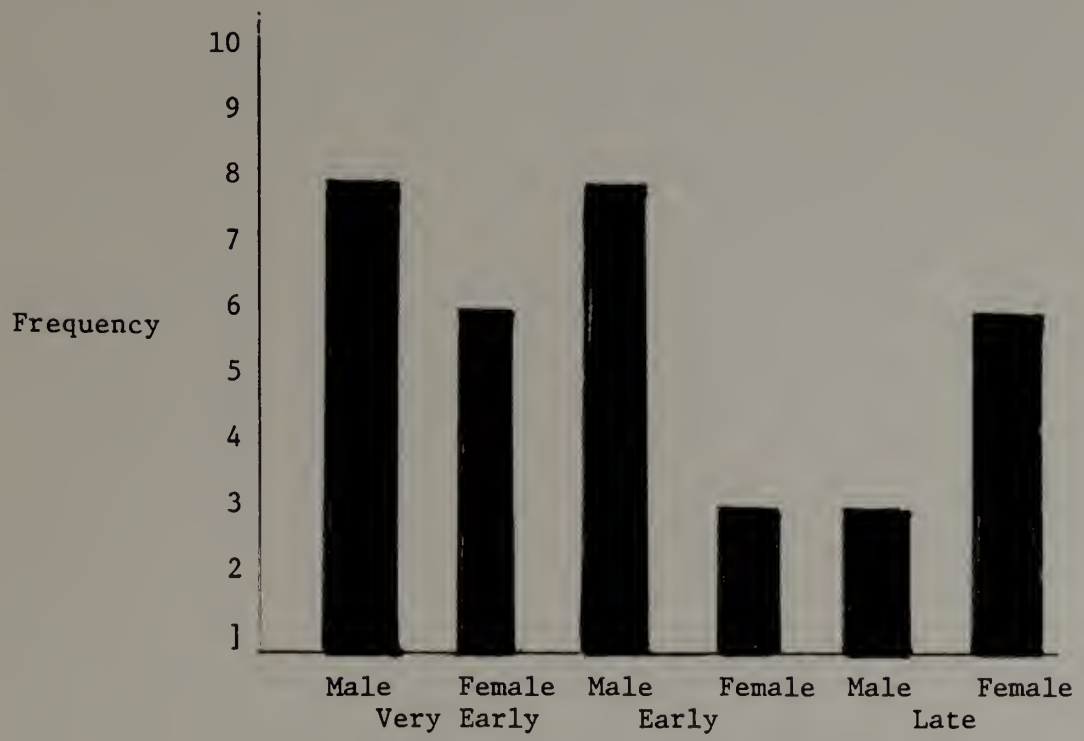

Figure 9. Distribution of Subjects According to Sex Over the Three Ages of Identification Groups

It also seems that the majority of identification occurs during transitional periods. Peaks in identification seem to occur at the beginning of elementary school, junior high, high school, and finally at entry to the community college. (See Figure 10).

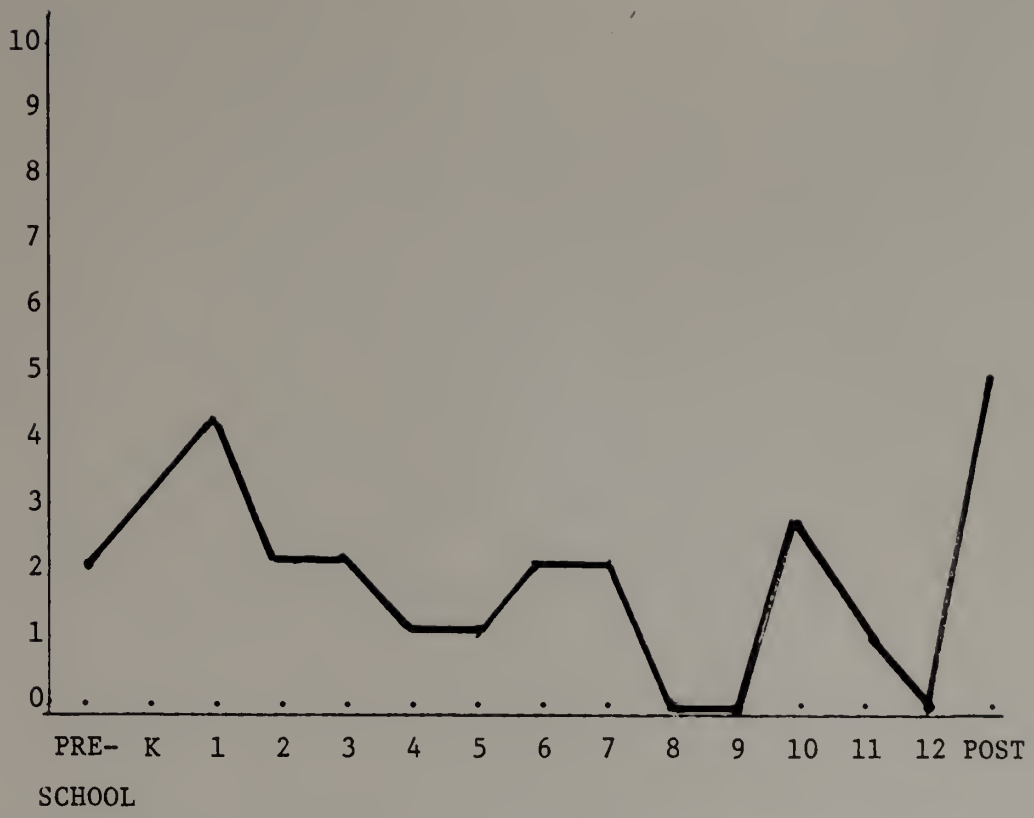

Fig. 10. A Distribution of Subjects Based on School Grade of Identification.

Also of interest is that the Very Early Identified are more likely to be placed in a special class than those identified in the other age groupings. Undoubtedly, a severity of disability factor is confounded. (See Figure 11).

A number of factors relating to support services seem somewhat related to age of identification. First, it is clear that the majority of those in the Very Early and Early Identified Groups have received

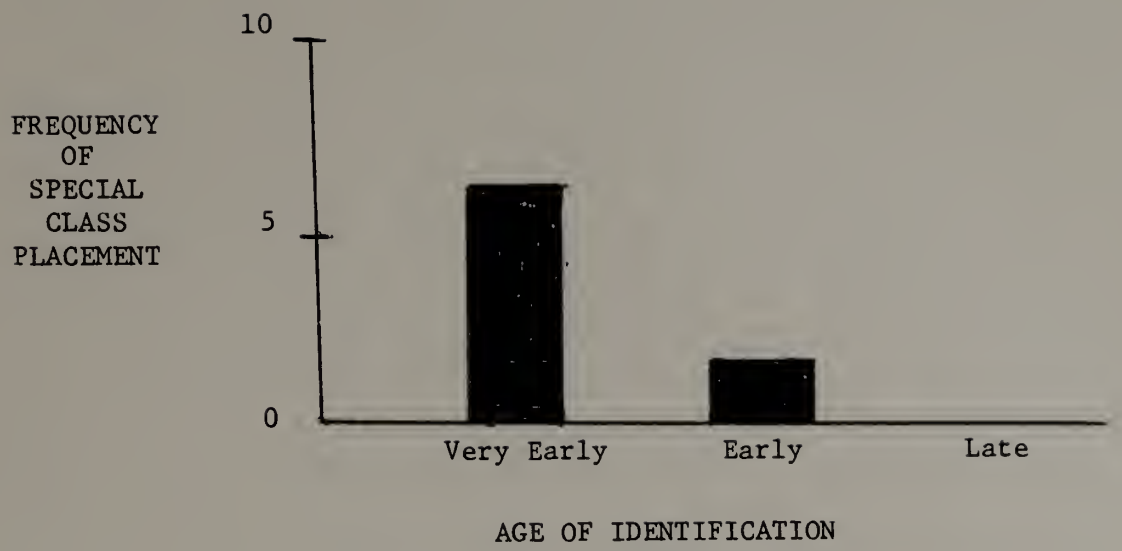

Figure 11. Frequency of Special Class Placement Over the Age of Identification Groups

some kind of special services related to their disabilities. This is not true of the Late Identified Group. The data seems to indicate that a number of students in this latter group come to institutions of post-secondary education with little or no formal training or support in coping with their disabilities.

All groups indicate a dropoff in current services. The Late Identified Group is again the greatest deprived. This may be attributable to a lack of information or historical connection to available resources. However, without exception, all groups lean toward a need for current resources. The Very Early and Early Identified Groups tend to focus on academic support needs. The Late Identified Group, as expected, report broader academic and social support needs.

In summary, there is a trend toward earlier identification of learning disabled males. This may be related to a higher incidence of more severe learning disabilities in males. Also, the tendency for identification during academic transition periods is noted. A greater propensity for special class placement in the very early identified is mentioned. This will be later discussed in relation to the impact of severity of disability on the overall data. Finally, the earlier one is identified the more likely they will be provided with varied support services. There seems to be a continued drop-off in services the later one is identified despite an expressed need for continued support. I turn now to an overall summary of the research and a more in-depth discussion of its implications.

CHAPTER V

SUMMARY DISCUSSION CONCLUSION

Summary

The focus of this research has been on the associated disorders of learning disabled adults. In an effort to provide a background for the current research, an overview of the historical development of the learning disabilities field in general is provided from the early work of Morgan, an English opthamologist, in the late 1800's to the present state of the field. The relative newness of learning disabilities as an independent discipline is given special emphasis.

In the interest of definition, several are offered. Despite the scope of the various definitions, Hallahan and Kauffman (1976) are quoted as isolating five major points that are almost universally present in any definition. They state:

> "The learning disabled child: (a) has academic retardation, (b) has an uneven pattern of development, (c) may or may not have central nervous system dysfunctioning, (d) does not owe his learning problems to mental retardation or emotional disturbance."

These five points are clearly present in the definition operationally employed by this study. The definition laid down by the National Committee on Handicapped Children serves as a guide in ascertaining experimental subjects:

> "Children with special learning disabilities exhibit a disorder in one or more of the basic psychological processes

> in understanding or in using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc. They do not include learning problems which are due primarily to visual, hearing, or motor handicaps, to mental retardation, emotional disturbance, or to environmental disadvantage." (Hallahan and Kauffman,, 1976).

Beyond a discussion of definition, problems in the areas of prevalence, theory, diagnosis and intervention strategies are pointed out for the field in general. However, it is emphasized that all these problems are compounded as one considers the plight of the learning disabled adult. Cox (1977) indicates that a review of the learning disabilities literature reveals that there is a serious deficiency in research, theory, and remediation techniques for learning disabled adults. Other authors (Wennberg and Hare, 1977, and Scranton and Downs, 1975) cite a general lack of knowledge of both the problems of older learning disabled students and of the methodologies necessary to help them. Also noted is a steady decline in services and attention as a function of age.

In the interest of meeting the needs of these learners, Sheralyn Cox (1977) posits that remediation and compensation for the learning disabled adult requires three areas of intervention: (1) identification, (2) individualized adult education, and (3) remediation of associated disorders. Focusing on the third area of intervention

reveals perhaps the greatest gap in the literature. The literature around this issue is reviewed. Several studies indicate deficits in self-concept in learning disabled children. (Chapman and Boersma, 1979; Thomson and Hartley, 1980; Rosenthal, 1973 and others.)

As one turns toward an examination of adolescent populations in this regard, the literature has much less to offer. Most studies do indicate, however, that deficits in self-concept persist into adolescence. (Rosenberg and Gaier, 1977, and Kranick, 1978.) Bingham (1980) casts some doubt on this contention, however. He found a less pronounced difference in self-concept between learning disabled and non-learning disabled adolescents than was evident in a preadolescent group. He suggests that differences may be masked by the general crisis of adolescence.

Moving on to an examination of an adult population reveals yet a greater gap in the literature. I am unable to cite any study of a truly empirical nature. It is pointed out that subjective depictions of the learning disabled adult range from "generally possessive of mild emotional disorders..." to "every adult with a learning disability has a psychiatric problem as well" (De Brosse, 1978).

It is within this framework that the present study is designed comparing a group of thirty-seven (37) non-learning disabled adults to a group of thirty-four (34) learning disabled adults on the basis of self-concept. All subjects are drawn from the Massachusetts Community College System and a private post secondary vocational program. As measures of self-concept the Tennessee Self Concept Scale and a Personal Data Form are administered. The resulting data is analyzed

along several stated hypotheses:

Hypothesis I: Learning disabled adults will exhibit more indications of negative self-esteem in general than a non-learning disabled comparison group, as measured by the Tennessee Self Concept Scale. Four of the Tennessee Scales are examined in testing this hypothesis, the Total P Score, a measure of overall self-esteem; the Row 1 P Score, identity; the Row 2 P Score, self-satisfaction; and the Row 3 P Score, behavior. No significant differences on any of these scores is evident.

Hypothesis II: Learning disabled adults will express less self-satisfaction than a non-learning disabled group. Two of the Tennessee scales are examined as measures of self-satisfaction, the Row 2 P Score and the Self Criticism Score (SC). As already stated, no difference is evident between groups on the Row 2 P Score. However, the learning disabled sample scores significantly higher than the non-learning disabled group on the Self Criticism Score.

Hypotheses III through VII: These hypotheses state that learning disabled adults will display more indications of a negative sense of physical, moral-ethical, personal, family, and social self than a non-learning disabled control group. The only significant finding noted is along the dimension of moral-ethical self. However, the difference runs counter to the stated hypotheses. The learning disabled group actually scores somewhat higher on the Column B Scale of the Tennessee, a measure of moral self, than the non-learning disabled group. No other significant differences are noted along the other stated aspects of the self-concept.

Hypothesis VIII: The learning disabled group will report more negative indications of academic or school self than the non-learning disabled group. The data yielded by the Personal Data Form supports the hypothesis. The experimental group scores significantly lower in terms of academic self-concept than the control subjects.

Hypothesis IX: The learning disabled group will present a greater number of deviant features than the non-learning disabled groups. Six of the Tennessee empirical scales are examined: The Defensive Positive Scale (DP), the General Maladjustment Scale (GM), the Psychosis Scale (PSY), the Personality Disorder Scale (PD), the Neurosis Scale (N), and the Personality Integration Scale (PI). Also examined was the Number of Deviant Signs Score (NDS). All of these scales, with the exception of the N Scale, support the hypothesis. The learning disabled group does indeed present a greater number of deviant features.

In addition to an evaluation of the data according to the stated hypotheses, three other trends are noted in contrasting the two groups. Based on the True/False ratio of the Tennessee, there appears to be a greater tendency in the learning disabled group to achieve self-definition or self-description by focusing on what one is and relatively less able to accomplish the same thing by eliminating or rejecting what one is not. Also evident is greater certainty in the learning disabled group about the way they see themselves as measured by the Distribution Scale of the Tennessee. Finally, greater conflict is noted in the learning disabled group both within single areas of self-perception and between different areas of self-perception.

Subsequent to the above analysis, the experimental subjects are

divided on the basis of age of identification. Three groups are established: Very Early Identified, Early Identified, and Late Identified. Three stated hypotheses are evaluated.

Hypothesis X: The later identified group will exhibit more negative self-esteem in general than each earlier identified group. The Total P Score, overall self-esteem, and the Row 1, 2, and 3 P Scores, identity, self-satisfaction and behavior, reveal no significant differences between groups.

Hypothesis XI: The later identified group will exhibit less self-satisfaction than the earlier identified adults. As stated, the Row 2 P Scores, self-satisfaction, yielded no significance. The Self Criticism Scores over the three groups also indicate no significant differences on this variable.

Hypothesis XII: The later identified group will exhibit greater conflict in self-perception than the earlier identified subjects. Significant between group differences are cited contrary to the hypothesis as stated. The earliest identified group indicates the greatest amount of conflict. The late identified follow showing greater conflict than the early group. A severity of disability factor is suggested as contributory to this unusual trend in the data.

Beyond these stated hypotheses, significant differences are noted on the Distribution Scores of the Tennessee, a measure of certainty in self-perception. The implied trend is a greater certainty in self-perception the earlier one is identified as learning disabled. Also indicated is greater variability or less integration from one area of self-perception to another the earlier one is identified, as measured

by the Total Variability Score of the Tennessee. Finally, significant between group differences are evident on three of the empirical scales of the Tennessee: the Neurosis Scale (N), the Personality Integration Scale (PI), and the Number of Deviant Signs Scale (NDS). Again, however, the nature of the differences is not as clear as one might expect. The PI Scale shows greater integration the later one is identified. The NDS Scale points to a greater number of deviant signs the earlier one is identified. The N Scale suggests greater neurotic indicators in the Late Identified. However, the very early identified exhibit more neurotic indicators than the early group. Again, severity of disability may be contributory to all of the above results.

The data is also grouped according to the type of disability reported on the Personal Data Form. Five groups are established on this basis: visual, auditory, motor, multiple, and unspecified. The information yielded by the Personal Data Form regarding academic self-concept indicates significant between group differences as a function of type of handicap. The greatest deficit in academic self-concept is noted in the group unable to specify their disability followed by the visually handicapped, the auditorily disabled, and the motor handicapped, respectively.

Also noted are differences between groups on the Column Variability Scores of the Tennessee. This indicates differences in variability between physical, moral, personal, family, and social self as a function of the type of disability. The greatest variability is present in the group comprised of those subjects describing themselves as possessing a motor handicap.

Additional descriptive data resulting from analysis of the Personal Data Form is offered. Among the trends noted is a tendency for learning disabled males to be identified earlier than females. Also pointed out is a greater frequency of special class placement in the Very Early Identified Group. Further, the greatest frequency of identification is prior to the end of grade two with no further propensity for identification until post secondary settings.

Attention is also drawn to trends in service based on age of identification. Without exception, all three groups indicated the need for support services. The earlier identified report services historically and a greater incidence of current support than the Late Identified subjects. The Late Identified report broader support needs than the earlier identified subjects who more often focus solely on the need for academic support.

Discussion

The results of this research provide considerable information useful in meeting the needs of learning disabled adults. The reader will recall that the literature notes a steady decline in services for the learning disabled beyond the elementary setting. The responses obtained from the Personal Data Form utilized by this study certainly support the current literature in this regard. A steady decline in the identification of these learners is also noted. This decline in identification and service as a function of age is certainly not based on a lack of need for assistance. The majority of the learning disabled subjects contacted report continued support needs of an academic nature if they are to succeed and several, especially those late identified, report broader

personal support needs as well.

In order to effectively service these learners, the necessity for a greater understanding of their nature and their particular needs is indisputable. Cox (1977) cites the associated disorders of the learning disabled as one necessary area of compensation and remediation. The results of this research cast some light in this regard.

The deficits in self-concept noted in the majority of the child and adolescent studies cited are apparently not present in the adult population tested here. Overall differences in self-esteem and most aspects of the self-concept: physical, personal, family, and social are not indicated. The results contained herein seem more consistent with the Bingham (1980) study cited earlier. He found a less pronounced difference in self-concept between learning disabled and non-learning disabled adolescents than was evident in a preadolescent group. Perhaps the differences in self-concept reported in child populations tend to lessen with age and do not persist into adulthood as originally conjectured.

The reader will recall at this point that the literature reviewed regarding the learning disabled adult was highly suggestive of deficits in all of the above mentioned areas. These findings are not supportive of those who claim to have observed broad personal, social, and family deficits in the group. Perhaps a sampling issue is at hand. It is possible that a learning disabled adult in a community college or post secondary educational setting is either less handicapped or better adjusted in these areas of self-perception than in other learning disabled samples. This inconsistency serves to highlight the need for similar

research with learning disabled adults in other societal roles and settings.

Those interested in working with this population should be aware, however, that differences were noted in greater self-criticism and conflict in their self-perceptions. This difference is of particular significance when viewed in the Eriksonian framework for a healthy adulthood cited earlier (Cook, 1979). Erikson is quoted as pointing to a unified personality and an ability to accurately perceive oneself as two criteria of a mature adult. If one subscribes to this theoretical assumption, then the deficits noted serve as obstacles to development as a fully functioning mature adult. These findings are supportive then to Cook's observations that learning disabled adults often have difficulty in forming a unified sense of self and in seeing themselves accurately.

Also noteworthy is the higher degree of certainty in self-perception evidenced in the learning disabled group. This may suggest difficulty for those working to impact change in these learners. Certainly this characteristic should be maintained as a consideration in the design and implementation of remediation efforts on their behalf.

Evident too is a deficit in academic self-concept. Despite the fact that deficits in other aspects of the self do not clearly persist into adulthood, it is not so surprising that difficulties in the academic realm persist. Surely, this deficit serves as an impediment to adjustment in the school environment and warrants attention in meeting the post-secondary educational needs of these learners. The reader is reminded of the ever growing body of literature forming around the relationship between academic self-concept and performance or achievement

in the school environment.

Perhaps the most significant finding resulting from the comparison of the learning disabled and non-learning disabled groups lies in the area one might broadly term as emotional problems or difficulty in psychosocial adjustment. The learning disabled subjects display more characteristics associated with defensiveness, psychosis and overall personality disorder. They show lessened personality integration and overall a greater number of deviant signs.

In highlighting the importance of the Number of Deviant Signs Score, the Tennessee Manual cites Berg's "deviation hypothesis". The hypothesis states that individuals who deviate sharply from the norm in minor behaviors are likely to be deviant in more major aspects of behavior. It should be cautioned at this point that the learning disabled group does not deviate "sharply" from the norm on any of the scales just mentioned. However, their scores are significantly different than the control group scores.

The above results certainly warrant attention to the emotional needs of the learning disabled adult. It suggests support for Cox's contention that the compensation of associated disorders in the learning disabled is a necessary component of an overall educational program designed to successfully meet their needs. The findings also provide some support for those who have depicted the learning disabled adult as "generally possessive of mild emotional disorders of a neurotic type" (De Brosse, 1977).

The lessened personality integration noted lends further support to Cook's previously mentioned view of the learning disabled in an

Eriksonian framework (1979). Again, one of Erikson's criteria for a healthy adult is a unified personality. The data is consistent with Cook's contention that the difficulties in forming satisfactory peer and family relationships purported in childhood and adolescence hinders the learning disabled adult in forming a continuity in personality.

In providing emotional support to the learning disabled, this research further suggests attention be given to the age of identification. The data points to less personality integration in the earlier identified, greater certainty in self perception and overall a greater number of deviant signs in the earlier identified. This trend may well be tied to severity of disability. It is my assumption that those identified early as learning disabled are the more severely handicapped. This assumption finds some support in the fact that more of the Very Early Identified were placed in special classes than in any of the other groups. Future researchers may well consider building in some control for severity of disability in subsequent studies of this population. Clearly, more indications of neuroses are noted in those identified later in life. Perhaps this indicates a particular issue or counseling concern in the late identified.

In providing support or counseling services to the learning disabled it may also be useful to keep in mind the distinction between those early and late identified suggested by the NET Conflict Data. It seems that those later identified tend to over-deny their negative attributes while those earlier identified tend to over-emphasize their positive qualities. Either extreme serves as an obstacle to a healthy self-appraisal. An increased certainty in self-perception in the early identified presents

an additional concern in impacting their self-concepts.

Attention to the type of disability displayed is also suggested by the data. This is, of course, a consideration in tailoring an academic program based on learning style but it also seems to have some limited impact on the self-concept. Those unsure of the specific nature of their disability display the greatest deficit in this regard.

It is noteworthy also that as many as seventeen subjects are, even as adults, unable to specifically describe their disability. Also, since self-report is utilized in establishing the type of disability, I find the breakdown of subjects along this dimension somewhat suspect. A thorough investigation of those subjects specifically characterizing their disability might well serve to inflate the number of learning disabled unfamiliar with the details of their handicap. Again, this is suggestive of an additional counseling concern. Surely a thorough understanding of one's disability is essential to appropriate goal setting as an adult. This lack of understanding of one's disability becomes more important in light of Cook's previously cited concern that an inability to perceive oneself correctly may serve as an obstacle to the learning disabled in developing a mature personality (1979).

Prior to concluding, it is appropriate to again point out some of the limitations to be considered in evaluating the results of this research. Already pointed out is the lack of control for severity of disability and the difficulties involved in relying on self-report in conducting research of this kind. Also, the reader is reminded that particular caution be exercised in generalizing these results to learning disabled adults in general. All the experimental subjects included here

were taken from post-secondary educational settings. The impact of this selection factor should not be underestimated. An untold number of the learning disabled may never present themselves to post secondary settings. Lenkowsky and Saposnek (1978) suggest a likelihood that many learning disabled adults become "fringe" people who would be unlikely to surface in this kind of setting. Perhaps more generalized deficits in self-concept or more extreme emotional disorders would be evidenced in these other populations of learning disabled adults. This indeed suggests a consideration for future research.

Conclusion

The results of this study provide some initial clues as to the nature of the learning disabled adult in post secondary educational settings. The overall deficits in self-concept cited in the child studies are not clearly seen in this adult population. However, more specific deficits are indeed noted. These deficits seem in line with those who have described the learning disabled adult as possessive of mild emotional disorders. Broadly speaking, this research points to problems in psychosocial adjustment for the learning disabled. It seems too that age of identification and type of disability have some impact on psychosocial adjustment and some limited impact on the self-concept.

In conclusion, this research provides substantiation for the need for support for the learning disabled adult. It also sheds some light on the nature of these support needs. The psychosocial deficits noted clearly indicate the need for counseling or therapeutic intervention as an essential component or area of intervention in servicing the learning disabled adult in post secondary educational settings. It would seem

that this intervention would best be designed to assist the learning disabled in fully understanding the nature of their handicap, to alleviate deficits especially in the area of academic self-concept, and to attend to the greater potential for difficulties in psychosocial adjustment in this population.

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APPENDIX A

PERSONAL DATA FORM

1. Sex: Male _____ Female _____

2. Age _____

3. Highest Grade Completed _____

4. Do you have a learning disability? _____

   If yes, go on to the next question; if no, please skip to Item #12.

5. Type of learning disability:

Visual	☐	Motor	☐
Auditory	☐	Tactile	☐
Not Sure	☐	Other	☐

6. Please describe your learning disability briefly:

7. At what age or grade was your disability discovered? _____

8. Did you receive any special services? _____

   Please describe:

9. Are you currently receiving special services? _____

   Please describe:

10. Would you like to receive special services? _____

    If available, what do you think you would need?

11. What are your current academic/career plans?

12. How would you describe yourself as a student?

    Good ___ Fair ____ Poor ____

13. Please describe what it was like for you growing up with a "Learning-disability".

14. Do you see yourself as different?

    How so?

APPENDIX B

TENNESSEE
SELF CONCEPT SCALE

COMPUTER SCORED EDITION

by

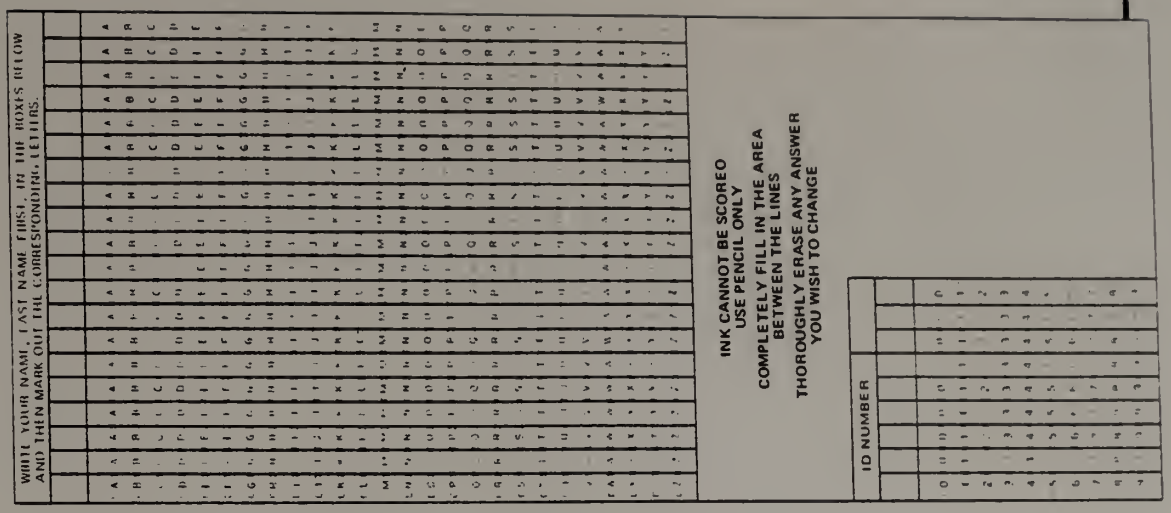
William H. Fitts, PhD

Published by

Counselor Recordings and Tests

Box 6184 - Acklen Station Nashville, Tennessee 37212

NCS Data-Reflex E 491 5432



INDICATE YOUR SEX HERE: MALE FEMALE

NAME _____ (last name first please)

STUDENT NUMBER _____ DATE _____

	C F	M F	P	M T	C T
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100	1	2	3	4	5

THE TENNESSEE SELF CONCEPT SCALE

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DIRECTIONS: Fill in your name and other information on the separate answer sheet.

The statements in this inventory are to help you describe yourself as you see yourself. Please answer them as if you were describing yourself to yourself. Read each item carefully; then select one of the five responses below and fill in the answer space on the separate answer sheet.

Don't skip any items. Answer each one. Use a soft lead pencil. Pens won't work. If you change an answer, you must erase the old answer completely and enter the new one.

RESPONSES	Completely False	Mostly False	Partly False and Partly True	Mostly True	Completely True
	C	M		M	C
	F	F	PF - PT	T	T
	1	2	3	4	5

TENNESSEE SELF CONCEPT SCALE

1. I have a healthy body 1
2. I am an attractive person 2
3. I consider myself a sloppy person 3
4. I am a decent sort of person 4
5. I am an honest person 5
6. I am a bad person 6
7. I am a cheerful person 7
8. I am a calm and easy going person 8
9. I am a nobody 9
10. I have a family that would always help me in any kind of trouble 10
11. I am a member of a happy family 11
12. My friends have no confidence in me 12
13. I am a friendly person 13
14. I am popular with men 14
15. I am not interested in what other people do 15
16. I do not always tell the truth 16
17. I get angry sometimes 17
18. I like to look nice and neat all the time 18
19. I am full of aches and pains 19
20. I am a sick person 20
21. I am a religious person 21
22. I am a moral failure 22
23. I am a morally weak person 23
24. I have a lot of self-control 24
25. I am a hateful person 25
26. I am losing my mind 26
27. I am an important person to my friends and family 27
28. I am not loved by my family 28
29. I feel that my family doesn't trust me 29
30. I am popular with women 30
31. I am mad at the whole world 31
32. I am hard to be friendly with 32
33. Once in a while I think of things too bad to talk about 33
34. Sometimes when I am not feeling well, I am cross 34
35. I am neither too fat nor too thin 35
36. I like my looks just the way they are 36
37. I would like to change some parts of my body 37
38. I am satisfied with my moral behavior 38
39. I am satisfied with my relationship to God 39
40. I ought to go to church more 40

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41. I am satisfied to be just what I am 41
42. I am just as nice as I should be 42
43. I despise myself 43
44. I am satisfied with my family relationships 44
45. I understand my family as well as I should 45
46. I should trust my family more 46
47. I am as sociable as I want to be 47
48. I try to please others, but I don't overdo it 48
49. I am no good at all from a social standpoint 49
50. I do not like everyone I know 50
51. Once in a while, I laugh at a dirty joke 51
52. I am neither too tall nor too short 52
53. I don't feel as well as I should 53
54. I should have more sex appeal 54
55. I am as religious as I want to be 55
56. I wish I could be more trustworthy 56
57. I shouldn't tell so many lies 57
58. I am as smart as I want to be 58
59. I am not the person I would like to be 59
60. I wish I didn't give up as easily as I do 60
61. I treat my parents as well as I should (Use past tense if parents are not living) 61
62. I am too sensitive to things my family say 62
63. I should love my family more 63
64. I am satisfied with the way I treat other people 64
65. I should be more polite to others 65
66. I ought to get along better with other people 66
67. I gossip a little at times 67
68. At times I feel like swearing 68
69. I take good care of myself physically 69
70. I try to be careful about my appearance 70
71. I often act like I am "all thumbs" 71
72. I am true to my religion in my everyday life 72
73. I try to change when I know I'm doing things that are wrong 73
74. I sometimes do very bad things 74
75. I can always take care of myself in any situation 75
76. I take the blame for things without getting mad 76
77. I do things without thinking about them first 77
78. I try to play fair with my friends and family 78
79. I take a real interest in my family 79
80. I give in to my parents.(Use past tense if parents are not living) 80
81. I try to understand the other fellow's point of view 81
82. I get along well with other people 82
83. I do not forgive others easily 83
84. I would rather win than lose in a game 84
85. I feel good most of the time 85
86. I do poorly in sports and games 86
87. I am a poor sleeper 87
88. I do what is right most of the time 88
89. I sometimes use unfair means to get ahead 89
90. I have trouble doing the things that are right 90
91. I solve my problems quite easily 91
92. I change my mind a lot 92
93. I try to run away from my problems 93
94. I do my share of work at home 94
95. I quarrel with my family 95
96. I do not act like my family thinks I should 96
97. I see good points in all the people I meet 97
98. I do not feel at ease with other people 98
99. I find it hard to talk with strangers 99
100. Once in a while I put off until tomorrow what I ought to do today 100